МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
імені В. Н. КАРАЗІНА

Ужик В. О.
Черкашина Н. І.
Сергеєва О. А.

English for Geographers

Навчальний посібник з англійської мови
для студентів геолого-географічного факультету

Рекомендовано Міністерством освіти і науки України як навчальний посібник для студентів вищих навчальних закладів

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Рецензенти: канд. географ. наук, доцент кафедри фізичної географії та картографії Харківського національного університету імені В. Н. Каразіна **Пересадько В. А.;**
канд. пед. наук, доцент, завідувач кафедри іноземних мов Харківського національного економічного університету **Борова Т. А.**;
доцент, завідувач кафедри іноземних мов Харківського національного автомобільно-дорожнього університету **Воронова Є. М**.

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Навчальний посібник розроблено для студентів геолого-географічного факультету денної та заочної форми навчання. Структура посібника дає можливість викладачеві вибрати оптимальні шляхи організації як аудиторної, так і самостійної роботи студентів з урахуванням рівня їх знань. Спеціальні тексти для читання, перекладу та переказу сприяють розвитку навичок одержання інформації та її аналітичної обробки. Більшість текстів аутентичні та адаптовані.

Посібник можуть використовувати на природничих факультетах студенти, аспіранти та наукові працівники відповідного профілю.

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ПЕРЕДМОВА

Структура навчального посібника дає можливість викладачеві вибрати оптимальні шляхи організації як аудиторної, так і самостійної роботи студентів з урахуванням рівня їх знань. Посібник складається з трьох взаємопов'язаних частин: тексти професійного напрямку зі словниками і вправами лексичного та граматичного характеру, граматичний довідник, тексти та діалоги з розмовних тем, матеріали для дискусій.

Спеціальні тексти для читання, перекладу та переказу сприяють розвитку навичок одержання інформації та її аналітичної обробки. Більшість текстів автентичні та адаптовані.

Посібник передбачає повторення граматичного матеріалу на рівні узагальнення та його подальше вивчення на мовному професійному матеріалі, системне повторення тем у процесі виконання комунікативно спрямованих вправ, використання матеріалу в розмовних формулах, виконання тестів та інших форм контролю та самоконтролю.

Матеріал згруповано у дві книги (Book 1, Book 2) і за уроками (48 Units): (1) тексти за фахом, лексичні вправи комунікативного та творчого характеру; (2) тексти загальнонаукового характеру з відповідними завданнями; (3) граматичний матеріал у теоретичному та практичному викладенні з різними вправами і тестами для контролю та самоконтролю; (4) розділ, який містить комунікативні завдання та вправи монологічного та діалогічного характеру на базі сучасних тенденцій розвитку усного мовлення; (5) тексти для обговорення для індивідуальної та групової роботи в аудиторії; (6) тексти та вправи для додаткового читання в процесі самостійної роботи студентів; (7) тексти та вправи для репродуктивної роботи; (8) англо-українські словники спеціальної лексики; (9) додатки, які містять таблицю хімічних елементів, математичні символи та допоміжні стійкі словосполучення.

Запропонований навчальний посібник розроблено для студентів ІІІ курсів геолого-географічного факультету денної та заочної форми навчання.

Навчальний посібник можуть використовувати на природничих факультетах студенти, аспіранти та науковці відповідного профілю.

BOOK 1

Part 1

Practice in Reading and Speaking

Unit 1

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

dimensions	- розміри
variety	- різновидність
to collapse	- розпадатися
tiny	- крихітний
universe	- всесвіт
lack	- не вистачає
chemistry	- хімія
the solar system	- сонячна система
circumference	- півколо
volatile	- леткий

2. Read and translate the following text using a dictionary:

Planet Earth

The Earth is not a large planet. Its familiar dimensions – a diameter of nearly 8,000 miles (12,750 km) and a circumference of almost 25,000 miles (40,000 km) – seem tiny against the vastness of a universe in which distances are measured in millions of light years. And even in our particular corner of the universe, the solar system, the earth is no giant. The planet Jupiter has a diameter more than 11 times as large as Earth's. Saturn is much larger. True, Earth is slightly larger than Venus and Mars, but more than 70 percent of our planet is covered by water, making our living space smaller still.

What Earth lacks in size, however, it makes up in the wealth and variety of its contents. More than 6 billion years ago, when it was born from a gaseous mass of material that slowly collapsed and congealed the earth was endowed with an almost infinitely complex chemistry. Throughout the planet's life, that chemistry was modified continuously. The molten earth mass, turning and cooling, differentiated into several shell-like layers, of

which the crust is but one. Gases escaped and began to collect in low-lying areas as liquids, starting the formation of the oceans. Other volatiles created the earth's initial atmosphere. Eventually that atmosphere supported the beginnings of life, and late in the planet's history, Earth attained levels of oxygen content that made possible the evolution of complex life forms. Humanity is the culmination of this process, and human communities began to make the first organized use of the earth's accumulated natural wealth.

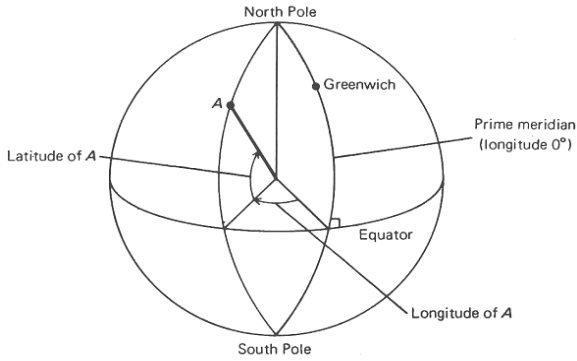


Fig. 1

3. Answer the following questions:

a) Is the Earth a large planet?
b) Name all the planets of the Solar System.
c) What is the largest planet in the Solar System?
d) What is the composition of the Earth?
e) In what units are distances in the universe measured?
f) When was the Earth born?

4. Insert the missing letters:

d…m…nsions, t…n…, co.....apse, …hemi…try, ci…cum..erence, la……, v…lat…le.

5. Fill in the correct word(s) from the list below:

to take shape, formed from, reverse, swirling, scientists, cooled, gravity, suggest, asteroids, dense, southern, tiny, rotates, orbits, gravity, summer, beneath, calm, blue, spins, Sun, significant, magnetosphere, electric current, giant, poles.

About 5,000 million years ago our Solar System began …… .The Sun and the nine planets …… a cloud of dust and gas …… in space.

Some …… believe that the centre of this cloud …… and contracted to form the Sun.

…… pulled the planets from the rest of the cloud. Other scientists …… that the dust cloud formed …… that joined together to make the Sun and planets.

Earth is a …… rocky planet, third nearest to the Sun, and ……..... compared with Jupiter and Saturn. While Earth …… on its axis each day, it also …… the Sun each year, held in orbit by the Sun's ……. One moon revolves around the Earth. From space the earth looks …… and …… but under its oceans, deep …… the crust, the Earth's core is fiery and white-hot.

As the Earth …… on its axis, it also orbits the ……. When the northern hemisphere faces the Sun it has its ……. At the same time the …… hemisphere faces away from the Sun and has its winter. The equator faces towards the Sun most of the time and there are no …… seasonal changes there.

The earth behaves like a …… magnet. Molten iron and nickel flow in the Earth's outer core and produce an ……. This electricity creates a magnetic field, or …… , that extends into space. Like a magnet, the Earth has two magnetic …… . From time to time, the magnetic poles …… polarity. The last time they changed was about 700,000 years ago. No one knows why this happens.

North and south geographical poles lie at either end of the Earth's axis (the invisible line around which the Earth turns). The magnetic poles' position varies over time. It is the Earth's magnetic field that causes a compass needle to point north.

6. Match the word with its explanation:

volatile	- the outermost layer of the Earth;
space	м a gaseous element or compound the dissolved in magma as a result of the high pressures within the earth's crust;
magnetic pole	- that part of the earth's surface and its immediate atmosphere that is inhabited by living organisms;
magnetic field	- envelope of air that surrounds the Earth;
crust	- area of high atmospheric pressure;

core	- the area beyond the Earth where the stars and planets are;
biosphere	- the central part of the Earth or any other planet;
axis	- an area around an object that has magnetic power;
atmosphere	- one of the two points that are not firmly fixed but are near the North and South Poles of the Earth, towards which the needle on a compass points;
anticyclone	- the imaginary line around which a large round object turns.

Section 2

1. Try to answer the questions. Then read the text to check some of your answers:

1. Name five countries where English is the first language.
2. How many people speak English as a first language?

a. about 350 million b. About 100 million c. About 250 million

2. English has many words which come from other languages. Match these English words with the languages they come from.

English word	*Language of origin*
Umbrella	German
Marmalade	Spanish
Elite	Italian
Quartz	French
Cargo	Portuguese

English: the language of millions

Job advertisements in quality European newspapers sometimes ask for a "good working knowledge" of English. Nowadays, large international companies often use English to communicate between offices and subsidiaries in different countries. 75 % of all letters and telexes are in English and 80 % of all the information in the world's computers is in English, so organizations need employees who speak good English. European professionals feel that English sometimes helps them to get a new job. It is usually a passport to more money, more travel, and more interest in their work.

Why is English so important as an international language? The statistics answer the question. About 350 million people speak English as a first language and another 300 million use English as a second language. It is the official or semi-official language in more than 60 countries and of

many international organizations. The International Olympic Committee, for example, always holds meetings in English.

International English has a rich and growing vocabulary. Many everyday words come from other languages. Umbrella, for example, comes from *ombra*, the Italian word for shade. English speakers get their breakfast marmalade from the Portuguese word *marmelada*. There are many Spanish words in English including cargo, flotilla, and macho; German gives the English language the words: hamburger, waltz, and quartz; and French provides liaison, elite, and cafe.

English helps the business world to communicate across national borders. Many international companies provide language training programmes for employees. They know that English is a passport to a successful future. It is the language of millions.

3. Look at the list of international English words. Tick which ones you use in your language. Find more examples:

weekend	jogging
marketing	feedback
sandwich	best-seller
deadline	management
parking	software
businessman	self-service
computer	shopping
golf	know-how
meeting	jumbo jet
walkman	smoking

4. Put questions to the following statements:

1. English helps the business world to communicate across national borders.
2. Many everyday words come from other languages.
3. Many international companies provide language training programmes for employees.
4. The International Olympic Committee always holds meetings in English.
5. European professionals feel that English sometimes helps them to get a new job.

5. Match the word with its explanation:

café - the goods that are being carried in a ship or plane;
cargo - a group of small ships;
elite - an object that you use to protect yourself against rain or the hot sun;
flotilla - a sort of jam made from fruit such as oranges or lemons;
hamburger - a hard mineral substance that is used in making electronic watches and clocks;
liaison - the regular exchange of information between groups of people, especially at work;
macho - a group of people who have a lot of power and influence because they have money, knowledge, or special skills;
marmalade - a small restaurant where you can buy drinks and simple meals;
quartz - a fairlys low dance with a regular pattern of three beats;
umbrella - a traditionally typical behaviour of a man that emphasises how brave, strong, and sexually attractive a man is;
waltz - a flat round piece of finely cut beef which is cooked and eaten in a bread bun, one of the fast food stuffs.

6. Put the following words in the correct order to make a sentence:

1. Large use offices English to communicate companies between subsidiaries in and different often countries international.
2. Is of the information in 80 % in the world's all computers English.
3. Organisations who need speak good employees English.
4. English professionals sometimes feel European that a helps to get new them job.
5. English so why as is an international important language?
6. International has a vocabulary rich and English growing.
7. Many from words other come everyday languages.
8. It language the millions of is.
9. English are there many in words Spanish.
10. Many language companies provide for international training employees programmes.

7. Unscramble the following words and translate them:

eavrtedismtens, uayqlit, espwarpens, cuesssfcul, ntnetraiaonil, rgaanisztioon, vcarboulay.

Unit 2

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

uppermost	- верхній
inner core	- внутрішня частина ядра
solid	- твердий
the mantle	- мантія
outer core	- зовнішня частина ядра
heavy	- важкий
viscous	- в'язкий
cell	- відсік
volcanic	- вулканічний
eruption	- виверження
fracture	- тріщина

2. Try to answer the questions then read and translate the following text using a dictionary:

1. What do you know about the surface of the Earth? What is it consisted of?
2. What do you know about the interior Earth? What is it consisted of?
3. What interior forces change the upper surface of our planet?

The Interior Earth

The **surface** of the earth is the outer skin of the crust, **the uppermost layer** of the planet. **The crust** consists of solid rocks, both on the continents and below the waters of the oceans. But liquid rock (lava) can penetrate through the vents of volcanoes and through fissures to flow out onto the surface. Although the crust's rocks are solid, they are violently shaken and even fractured by earthquakes. To know the surface we should study the crust of our planet as well as the water, wind, glaciers, and waves that attack it from above.

To understand the crust we need to know what supports it from below. Beneath the crust temperatures and pressures rise to such levels that the rock material becomes viscous (sticky, rather like hot tar). Chemical change generates the heat that keeps rocks in such a viscous or even molten state, and much of the earth's interior is continuously in motion. The crust averages from 6 to about 25 miles (10 to 40 km) in thickness.

The earth consists of a series of layers, with an extremely dense, heavy ball known as **the inner core** at its centre. This solid inner core has a radius of about 780 miles (1250 km) and is surrounded by a heavy liquid layer forming the outer core. Incredible heat and pressure keep the heavy metallic material of this outer core in a molten state to a thickness of nearly 1400 miles (over 2200 km). Outside the core lies **the mantle of the earth**, where the rock material is lighter and less dense than in the core; the complex mantle contains zones of viscous and liquid matter as well as solid rock. Some earthquakes are known to originate as much as 400 miles (650 km) into the mantle.

Overall, the mantle is about 1800 miles thick. In the late 1980s, scientific research based on more refined recording and interpretation of earthquake (seismic) waves began to unlock some of the mantle's secrets. It is known, for example, that the mantle's material is in continuous motion in giant convection cells. The moving material in these cells drags along the bottom of the solid crust and pushes and pulls pieces of the crust along. **Seismic waves** also indicate that in the mantle there is a significant change (a discontinuity) at a depth of some 420 miles from the earth's surface. It is already clear that interior forces change the upper surface of the crust: volcanic eruptions and earthquakes prove that. But the slow, continuous movement of material in the mantle causes more subtle changes in the crust, slowly pushing, pulling, warping, and even bending it.

3. Translate the sentences from the text with the words in bold type.

4. Answer the following questions:

a. What is the surface of the Earth?
b. What does the crust consist of?
c. How can lava penetrate into the crust and flow out onto the surface?
d. How can we know the surface?
e. What processes go on beneath the crust?
f. What is in the centre of the Earth?

g. What is the mantle of the Earth?
h. What do we know about the mantle?

5. Put questions to the following statements:

1. The surface of the earth is the outer skin of the crust.
2. Liquid rock (lava) can penetrate through the vents of volcanoes and through fissures to flow out onto the surface.
3. Chemical change generates the heat that keeps rocks in a viscous state.
4. Continuous movement of material in the mantle causes subtle changes in the crust.
5. The solid inner core has a radius of about 780 miles (1250 km).
6. There is a significant change at a depth of some 420 miles from the earth's surface.
7. Incredible heat and pressure keep the heavy metallic material of the outer core in a molten state.

6. Unscramble the following words and translate them:

oteru, ivsocus, liosphtheer, fscientiic, espice, tchik, amnlet, lovlera, ednes, ndiiceat, scrut, aredayl, ustble, gniat, ppuer, freine, nuoclk, rsuounrd, btoh, xeapmle, wbeol, lascgier, atr, giorintae, pllu, tineorir, wnid, wvaes, eenv, inern, draius, sictky, cinrebdile, aervage, ecll, tboomt, laeyr, folw, dpeht, kepe, talhugoh, eetrexmly, mlotne, psuprot, change, mootin.

7. Match the word with its explanation:

layer	- a quantity or thickness of smth that lies over a surface or between surfaces;
earthquake	- the part of the earth below the crust and surrounding the core;
core	- the hard substance that forms the main surface of the Earth, a piece of rock that sticks up from the ground;
mantle	- the smallest unit of living matter that can exist on its own;
cell	- a sudden, violent shaking of the earth's surface;
surface	- the waves relating to or caused by earthquakes;
volcanic eruptions	- to go through, to enter smth and pass or spread through it;
rock	- if a volcano erupts, then it explodes and sends smoke, fire and rock into the sky;
seismic waves	- the top layer of an area of water or land or outside or top layer of smth;

penetrate - the central part of an object.

8. Insert the missing letters and translate the following words:
vo…ca…ic, inte…p…etation, ma…t…e, ge…era…e, ro……, fi……ures, vi…lentl…, co…ti…uously, f…actu…e, dis…ont…nuity, vi…co…s, s…gn…ficant, bo……om, s..l…d, b…nd, in…eri…r, ……lten, wa…p, con…ectio…, l…qu…d.

9. Fill in the correct words from the list below:
interior, major, solid, outside, familiar, iron, rock, molten, outer, core, fluid, inner, shell, includes, floats.

1. …… of the Earth has four …… layers. 2. On the …… is the crust made of …… soil and rock. 3. Under this is the mantle, which is solid …… with a …… layer at the top. 4. The inside or …… of the Earth has two sections: an outer core of thick …… , and a solid …… core. Earth's outer …… is called the lithosphere. It …… the crust and parts of the upper mantle. The crust …… on the asthenosphere, like an iceberg on the sea. 5. The Earth probably comprises a …… core, …… liquid core, and a solid mantle of …… and magnesium silicates.

Section 2
1. Read and translate the following text using a dictionary:

What lies beneath

It all began in 1989, when Russian scientists at a remote Antarctic research field station, in the centre of the mighty East Antarctic glacial plateau, 1,250 km from the South Pole in one direction and 1,260 km from the coast in the other, started to drill a hole into the ice. The researchers knew exactly what they were looking for: trapped in the ice, which had steadily built up over hundreds of thousands of years, would be tiny bubbles of air that carried secrets of earth's past climate. It worked, and the now famous Vostok ice core (named after the station) was the first to show a clear link between raised carbon dioxide levels and a warmer atmosphere over the past 400,000 years.

But, as scientists drilled, it became clear that something else was lurking under the ice. For years Russian pilots in the area had noticed a strange flat region on the surface, and as the drillers neared a depth of 4,000m, the ice they dragged back to the surface started to look very different. It was not snow squeezed from the surface, through thousands of years of compaction, but refrozen water. Seismic surveys and satellite images

confirmed the scientists' suspicions: lying directly underneath the Russian station, way down in the freezing depths, was a lake of fresh, liquid water.

The scale of the underground reservoir, now called Lake Vostok, stunned experts. Covering an area twice the size of Yorkshire, it is up to 1,200 m deep. Its icy roof has probably sealed the lake from the rest of the planet for at least 15 m years. With no sunlight, and just traces of nutrients to provide energy, biologists quickly realised that if there is life in the lonely waters of Lake Vostok – and there is life everywhere else on Earth where there is fresh water – it might be very different from life on the rest of our planet.

At its most far-reaching, life that evolved in the lake from the simple organisms that drained into it millions of years ago could show us what we might find in the watery depths predicted to lie beneath the icy crust of Europa, one of Jupiter's moons, which is the prime candidate for finding life on another world.

Vostok is the biggest and most famous lake underneath Antarctica, but not the only one. Some 145 have been identified so far, and more will follow. Formed by geothermal heat melting the base of the ice sheet, which then acts as an insulating blanket to stop the water refreezing, all the lakes are dark, isolated from the outside world, and all pose the same problem to scientists who want to probe them for life.

Subglacial lakes stay liquid only if their ice blanket is thicker than about 3,000 m, which makes them awkward to access. But some are more awkward than others, and among the easiest to explore is Lake Ellsworth in West Antarctica, about 3,400 m down. If there is life in Lake Ellsworth, it is bound to be simple. "It will be basic stuff like single-celled organisms, algae, some viruses and fungi – that kind of thing", says one of the experts. It will be living under crushing pressure because of the weight of frozen water above, and nothing would survive being brought to the lower-pressure surface as it will just get blown apart.

2. Answer the following questions to the text:

1. What interesting were Russian scientists looking for in 1989 in the centre of the mighty East Antarctic glacial plateau?
2. What was it?
3. Is there a clear link between raised carbon dioxide levels and a warmer atmosphere over the past 400,000 years?
4. Did seismic surveys and satellite images confirm the scientists' suspicions of the fact that lying directly underneath the Russian station, way down in the freezing depths, was a lake of fresh, liquid

water?

5. Is Vostok a single lake underneath Antarctica?
6. What is the biggest and most famous lake underneath Antarctica?
7. Why do subglacial lakes stay liquid?

3. Insert the missing letters and translate the following words:

r…m…te, i…enti…ied, a…k…ard, u…dern…ath, sub…la…ial, in…ulat…ng, ge…the…mal.

4. Match the word with its explanation:

researcher	- someone who works or is trained in science;
scientist	- someone who is involved into serious study of a subject, in order to discover new facts or test new ideas;
compaction	- a scientific laboratory, a research station in the area of interest;
surface	- a large area of flat land and ice, or formed by glaciers that is higher than the land around it;
glacial plateau	- the top layer of an area of water or land;
field station	- the way due to which substance is arranged so that it fits neatly into the space available;
crust	- to find information, or to succeed in reaching a place;
access	- the hard outer layer of the Earth or something;
algae	- a simple type of plants that has no leaves or flowers and that grows on plants or other surfaces; mushrooms and mould are both fungi;
fungi	- a very simple plant without stems or leaves that grows in or near water.

5. Put questions to the following statements:

1. The scale of the underground reservoir stunned experts.
2. It will be living under crushing pressure because of the weight of frozen water above.
3. The researchers knew exactly what they were looking for.
4. It all began in 1989, when Russian scientists at a remote Antarctic research field station started to drill a hole into the ice.
5. Biologists quickly realised that if there is life in the lonely waters of Lake Vostok it might be very different from life on the rest of

our planet.

6. For years Russian pilots in the area had noticed a strange flat region on the surface.
7. Life that evolved in the lake from the simple organisms that drained into it millions of years ago could show us what we might find in the watery depths predicted to lie beneath the icy crust of Europe.

6. Match a word in A with a word in B and translate the word-combinations obtained:

A	***B***
South	*plateau*
field	*bubbles*
glacial	*station*
tiny	*Pole*
ice	*core*
clear	*link*
warmer	*atmosphere*
flat	*region*
refrozen	*water*
seismic	*surveys*
satellite	*images*
scientists'	*suspicions*
freezing	*depths*
liquid	*water*
underground	*reservoir*
icy	*roof*
lonely	*waters*
simple	*organisms*
watery	*depths*
Jupiter's	*surface*
prime	*moons*
famous	*candidate*
geothermal	*lake*
insulating	*heat*
subglacial	*blanket*
crushing	*lakes*
lower-pressure	*pressure*

Unit 3

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

quake-prone	- схильний до землетрусів
mid-ocean	- середньоокеанський
originate	- траплятися
shield	- щит
epicentre	- епіцентр
collide	- зіштовхнутися
cliff	- бескид
scarp	- крутий схил
scale	- шкала

2. Read and translate the following text using a dictionary:

Earthquakes and Volcanoes

The earth's crust is in constant motion. The earth's most quake-prone belts surround the Pacific Ocean and cross Eurasia along the Alps and the Himalayas. The mid-ocean ridges can also be regarded as belts of frequent earthquakes. The shield areas of the continents, on the other hand, are much less affected.

Earthquakes originate within the crust as well as the upper mantle, but most begin within 3 miles (5 km) of the surface. The point of origin is the earthquake's focus, and the location directly above this focus, at the surface of the crust, is the epicentre. An earthquake results from the sudden movement of rock that has been subjected to prolonged stress. When two lithospheric plates collide, stresses are set up that cause certain rocks to fracture. Such fractures in the crust are called faults, and some faults such as the San Andreas Fault in California are well known as the source of repeated severe earthquakes. It was a movement along this fault that caused the 1906 earthquake that destroyed much of San Francisco.

Repeated earthquakes along a fault zone can produce cliffs called scarps. Earthquakes also generate landslides that block streams and change the character of river valleys. Occasionally a powerful earthquake with

a submarine focus creates a mighty ocean wave, or tsunami, capable of doing severe damage to coastal settlements.

The field of seismology (a branch of geophysics) has contributed much to the unravelling of the mysteries of the earth's interior. In 1935, Charles F. Richter, seismologist at the California Institute of Technology, devised a scale of earthquake magnitudes that is still in use. It ranges from 0 to 9, and the numbers represent the calculated energy released at the earthquake focus. Earthquakes measuring from 0 to 4 are minor, from 4 to 7 moderate, and over 7 severe and destructive. Quakes with a magnitude over 7 are recorded all over the world, and these severe shocks generate the waves that penetrate the globe and permit analysis of the interior. The 1906 San Francisco earthquake had a magnitude of 7.8, and the 1964 Alaska earthquake about 8.5. Even though Anchorage was severely damaged, this earthquake's epicentre was 75 miles (120 km) from the city. In 1976, an earthquake with a magnitude of 8.4 struck east of Beijing, the capital city of China. This was one of the century's most destructive earthquakes.

3. Answer the following questions:

a. Where are the most quake-prone regions?
b. Are shield areas affected as well?
c. Where do earthquakes originate?
d. What is the epicentre of the earthquake?
e. What happens when two lithospheric plates collide?
f. What are faults?
g. What can repeated earthquakes produce?
h. What is a tsunami?
i. What science deals with the mysteries of the earth’s interior?

4. Fill in the correct words from the list below:

coast, edges, movement, molten, burst, lava, ash, spew, destruction, earthquake, slight, mild, severe, huge, young.

Most volcanoes are found near the ……or under the ocean. They usually form at plate …… Here crust …… allows hot ….. rock called magma to rise up from the inside the Earth and …… through the crust. Hot magma is called …… when it flows out of a volcano …… , steam, and gas also …… out and cause great …… .

More than a million times a year, the Earth’s crust suddenly shakes during an …… . Most of the world’s earthquakes are fairly …… . A …… earthquake can feel like a truck passing; a …… one can destroy roads and buildings and cause the sea to rise in …… waves. Earthquakes

often happen near volcanoes and …… mountain ranges: at the edges of the earth's plates.

5. Match the word with its explanation:

tsunami - not active or growing now but able to become active or to grow in the future;
extinct - a series of connected things or people;
dormant - no longer in existence;
chain - when the burning rocks are thrown out from the volcano;
eruption - an extremely large wave in the sea caused, for example, by an earthquake.

Section 2

1. Before reading try to answer the following questions:

- Think of as many words as possible related to the theme "Woodlands".
- Why are trees important? In what way are forests damaged? What can be done to prevent damage being done to the environment?
- Try to answer the following questions by guessing, then read the text and find out if your guesses were correct.

A. What is happening to Europe's trees?
B. What are the causes of this environmental problem?
C. What will happen if forests continue to be damaged?
D. What is European Parliament going to do about the problem?

2. You are going to read a newspaper article about environmental damage to Europe's forests. Choose from the list (A-H) the sentence which best summaries each part (1-6) of the article. There is one extra sentence which you do not need to use:

A. More research is needed to find out the reasons for tree damage.
B. The situation in Europe may soon get better.
C. Environmental damage is threatening certain European industries.
D. Planting more trees is only part of the solution.
E. Threatened trees need European protection.
F. Europe's trees have been harmed in a variety of ways.
G. The forestry industry has acted more quickly than European governments.
H. Europe should pay more attention to its own environmental problems.

Europe's trees in danger

Forestry experts have called on the European Union to use its powers in order to protect the continent's woodlands. This follows the publication of a recent report showing that one quarter of Europe's trees showed signs of severe damage. The experts are asking for wide-ranging action as it now seems clear that Europe's forests are reaching crisis point.

The study examined trees across the whole of Europe and found that they were being damaged throughout the continent. Twenty-six per cent of Europe's trees had lost significant numbers of leaves, while more than ten per cent showed signs of discoloration.

The report also put forward factors such as air pollution and climate change as causes of this environmental problem. Responding to the report, a European spokesman said it was too early to be certain about what was causing the widespread damage. The European Commission has now begun a more detailed 20-year study which will hopefully produce clearer answers.

Although Europe is quick to condemn tropical countries over their forestry policies, it has been ignoring the crisis in its own backyard. Europe now has fewer forests than any other continent except Antarctica, and has less protected woodland than any other region in the world.

Less than one per cent of ancient forests remain. If this is allowed to continue, the damage to Europe's forest systems will result in a reduction in water quality and will cause a crisis in the fishing, tourist and timber industries, as well as threatening the ecological balance in Europe.

The forestry industry has made substantial progress in organizing a programme of forest management, but European governments have not been acting quickly enough. There is a need for further European action on commitments made at the Rio Earth Summit in 1992.

Soon the World Wildlife Fund for nature (WWF) will be reporting on how well governments around the world have kept their Rio summit promises. Most governments are expected to get poor results. The situation in Europe may, however, be about to improve as the European Parliament is to begin investigating forest protection and may ask for new safeguards to protect the health of Europe's trees.

3. Fill in the gaps with the correct word(s) from the list below:

condemned, commitment, put forward, experts, reductions, discoloration, wide-ranging, responded, backyard, woodland.

1. The residents were opposed to the construction of a nuclear power station in their …….. (area).
2. To be a successful manager you need to have …… experience (varied).
3. The …… on the hill is home to numerous birds and animals (tree covered area).
4. When asked, Jane is always ready to …… good ideas (suggest).
5. To avoid …….. Wash light and dark coloured clothes separately (spoiling the colour).
6. The President said that he …….. the practices of military regimes (found unacceptable)
7. Educational …… are trying to improve the standards in schools (specialists).
8. My holiday had to be cancelled because of work …… (obligations).
9. There are special ticket …… for students (discounts).
10. The government …… positively to the demand for new anti-pollution laws (answered).

4. Fill in the correct word derived from the words in brackets:

World's Wildlife in danger

1) …… (conserve) are very concerned about the ever-growing number of 2) ……. (danger) species in the world. 3) ……..… (environment) problems such as freak weather conditions, fire and acid rain are resulting in the 4) ……..… (destroy) of vast area of woodland and forest. These areas are home to large numbers of animals and, as the land is vital to their 5) ……..… (survive), this is having 6) ……..… (alarm) effects.

7) ……..… (ecology) advocate the use of ozone-friendly products and, of course, recycling to achieve a 8) …… (reduce) in environmental damage. Safari parks have also been established in an attempt to give 9) ……..… (protect) to animals from big-game hunters. Numbers are slowly beginning to increase and will 10) ……..… (hope) continue to do so in the future.

5. Choose the correct item:

1. Zoologists work hard to …… endangered species.
   a. protect b. shelter c. cover d. support

2. Greenpeace is going to release a(n) …… on water pollution.
   a. edition b. issue c. publicity d. report
3. The tropical …… of Africa need to be protected from destruction.
   a. regions b. states c. places d. sites
4. To improve the …… of the water, use a water-purification tablet.
   a. standard b. amount c. quantity d. quality
5. Acid rain has caused a lot of …… to Europe's trees.
   a. wreck b. ruin c. damage d. disaster
6. Five world leaders are due to attend the …… meeting in London.
   a. tip b. top c. summit d. peak

6. Fill in the appropriate idiom from the list below:

backup, backbreaking, backbone, sign of the time, shows signs of, sign language

1. The ever increasing crime rate is a ……..…**(typical characteristic of the present).**
2. Picking strawberries in the summer heat can be …… work **(physically exhausting).**
3. The policeman called for …… when they spotted a house being **burgled (reinforcements).**
4. Your work ……..… improvement; keep it up! **(has evidence of)**
5. Deaf people communicate by using …… **(hand movements and gestures**).
6. The fishing industry is the …… of the island's economy **(most essential element)**.

7. Read the text again and give a brief summary of what you have read, using the following headings:

*Dangers that forests are facing.
*Consequences of damaging the woodlands.
*Action being taken by the European Community.

8. Match the word with its explanation:

experts	- a bad effect on something;
damage	- someone who has a special skill or special knowledge of a subject;
summit	- a rule or an agreement that is intended to protect smth from possible dangers;

safeguard - an important meeting between the leaders of several governments.

Unit 4

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

conqueror	- завойовник
blessing	- благословення
curse	- прокляття
offshore	- такий, що прямує від берега
scholars	- учені
upwelling	- підняття
fishing grounds	- риболовні угіддя
huge	- величезний
evidence	- свідоцтво

2. Read and translate the following text using a dictionary:

Climate

When the Spanish conquerors sailed southward along the west coast of the Americas, they saw ocean currents that were a blessing and a curse. A curse because the waters moved in the opposite direction: northward and offshore. A blessing because in the tropical heat those waters were cool, even cold.

Soon scholars were asking the obvious questions: why are the waters off Ecuador and Peru so cool under the heat of the equatorial sun? From the northward movement of the current, it was concluded that this was Antarctic cold, carried to the tropics. Alexander von Humboldt, the great explorer-geographer, measured water temperatures that seemed to confirm that idea; for a time, his name was associated with the phenomenon: the Humboldt Current. Today we know that something else contributes more significantly to the coolness of the ocean off tropical western South America: an upwelling of cold water from hundreds of feet below the surface. And the current is now called the Peru Current. Between them, the Peru Current and those upwelling, cold waters, produce the temperatures that Humboldt recorded.

As time went on, it was found out that those cold waters near Peru and Ecuador contain huge amounts of marine life. In fact, they were the richest fishing grounds anywhere in the world, and from Peruvian and Ecuadorian

ports, fleets of fishing boats brought back millions of tons of fish over the years. The boat captains noticed, however, that something happened every year around Christmas or very early in the new year: their catch shrank to only about 10 to 20 percent of the average for other periods. The fish seemed to disappear. Then, a couple of months later, the fish would come back and the catch would be back to normal.

It was known that the scarcity of fish, beginning in late December, had something to do with another phenomenon: the water that was usually so cool, warmed up. And the direction of the current changed. Warm water started to flow southward along the coast, always around Christmas time. So, the locals called this annual event El Nino (The Little One), a name given to the Christ child whose birthday coincides very nearly with the onset of the warming trend.

Soon scientists began to realise that this El Nino might be more than a local phenomenon. As more became known about the prevailing winds in the area, the mechanism was revealed: when winds blow from east (land) to west (toward water, the Pacific), surface water is moved from the coast into the farther ocean. Taking the place of this windblown water is water from the deep-cold, nutrient-rich water that rises to fill the now-available space.

Another question proved much more difficult to answer. How does El Nino overcome this mechanism, replacing the cold upwelling water with a warm southward-flowing current? And why is El Nino so much stronger in some years than in others?

As climatologists and meteorologists studied these problems, they realised that they had come upon something much more important than a mere local phenomenon. When El Nino was particularly strong, as in 1891 and 1925 and in 1982-83, it caused more than just a drop in the fish catch. Climatic events elsewhere in the world seemed somehow connected to it: monsoon failure in India, famine in Africa, typhoons in unusual Pacific locations. El Nino appeared to be a manifestation of global climatic irregularity, evidence that something was out of balance.

3. Answer the following questions:

1. What was a blessing and a curse for the Spanish conquerors?
2. Why were the currents a blessing?
3. Why were the currents a curse?
4. Who was the first explorer to describe El Nino?
5. What does the name El Nino mean?

6. When does it happen?
7. What are the climatic events of El Nino?

4. Put the questions to the following statements:

1. When the Spanish conquerors sailed southward they saw ocean currents.
2. Soon scholars were asking the obvious questions.
3. Alexander von Humboldt, the great explorer-geographer, measured water temperatures.
4. Today we know that an upwelling of cold water from hundreds of feet below the surface contributes significantly to the coolness of the ocean.
5. Climatologists and meteorologists studied these problems.
6. Cold waters near Peru and Ecuador contain huge amounts of marine life.
7. From Peruvian and Ecuadorian ports, fleets of fishing boats brought back millions of tons of fish over the years.
8. Warm water started to flow southward along the coast, always around Christmas time.
9. Soon scientists began to realise that El Nino might be more than a local phenomenon.

5. Fill in the correct word(s) from the list below:

long-term, absorb, zones, ice-covered, distance, share, same, nearer, altitude, three, differ, dense vegetation, factor, tundra, falls, low slopes, a pattern, conditions, reach.

Typical …… weather conditions for an area are known as its climate. There are …… broad climate zones: tropical, temperate, and polar. One …… that affects climate is …… from the equator (latitude). Different areas of the planet can …… the …… climate because they share the same latitude. The …… the equator, the warmer the climate, and the nearer the poles, the colder. Distance from the sea and …… also affect climate.

The temperate climates of North America and Northern Europe have seasons and a …… of seasonal rainfall.

In a city, such as Paris, the weather may …… from that of outlying areas. Roads and buildings …… heat to create a local or microclimate.

The climate in regions of …….. Near the equator is hot and wet all year round. The temperature stays constant at about 80-82^{0}F (27-28^{0}C).

At the …… poles, temperatures only rise above freezing for a few months of the year. The cold, dry …… region surrounds the north pole.

The temperature …… the higher up a mountain you go. Trees and plants grow on the …… but little grows above the snowline.

Few animals and plants can live in the hot, dry …… of the desert. The temperature can …… 38^0C (100^0F) and it may not rain for several years.

6. Match the word with its explanation:

scholar	- connected with the sea and the creatures and plants that live there;
phenomenon	- not enough and difficult to obtain;
marine	- a person who knows a lot about a particular subject because they have studied it in detail;
famine	- a fact or an event in nature or society, especially one that is not fully understood;
scarcity	- a lack of food during a long period of time in a region;
curse	- some approval or encouragement for a plan, activity, idea;
blessing	- something that causes trouble, harm;
evidence	- a scientist, which deals with climate;
coast	- a scientist, which deals with weather conditions;
climatologist	- the area where land meets the sea;
meteorologist	- facts or signs that show clearly that something exists or is true.

Section 2

1. How many different types of weather can you name? What is your favourite type of weather? How can you find out what the weather will be like?

2. Name some jobs for which a weather forecast is important. Now listen to the text and list any other jobs in which the weather plays an important role.

3. You are going to read a newspaper article about the weather. Seven sentences have been removed from the article. Choose from the sentences (A-H) the one which fits each gap. There is one extra sentence which you do not need to use. There is an example at the beginning.(0)

Weather from the West

For many years I used to think that the national interest in weather was as much a British obsession as the state of their lives was a French one, but I've realised it's not really like that (0 – C).

When other subjects could be controversial, embarrassing or too personal, the British prefer to resort to unimportant observations: "Rather cold today, isn't it?" they say. In these damp and misty off-shore islands, the weather and its comparative unpredictability is quite an interesting subject (1)

Once our regional television weather presenter showed me around. He is, like other forecasters, actually an employee of the Meteorological Office. Doing the televised forecast, although a high profile activity, is only part of the work of those employed by the Met Office.

A wide variety of people have a serious interest in the weather and will pay for an early insight. It's not just the obvious ones like the national Rivers Authority, which can usefully learn about rainfall, but the police, the highway authorities, the airports, and the like.

(2) The power generators and the fuel industries take advice on expected temperatures which dictate demand and, for the gas industry, the need for storage capacity. I was intrigued by the range of information inputs which provide the basis of the forecast from the Bristol Weather centre (3).

There are other satellites, either orbiting the earth or in a fixed position. Weather stations, wireless operators on ships in the Atlantic, radar – which shows exactly where the rain is – and computer modeling add to the flow of information.

At the Met Office we were able to look at readings from weather stations in eastern Canada and the United States. There, it was the middle of the night (4). We watched as the computer graphic zoomed into a weather station in Vermont to take a reading of temperature, cloud cover and wind direction.

Most of the British weather comes from the west, so knowing what is happening on the eastern seaboard of North America will often prove relevant more than 24 hours later (5). But the Met Office is pleased to say they are 85 per cent accurate in their forecasts.

I have observed that when the local authorities in Boston forecast rain, it really does rain. The reason is, of course, that on the coastal edge of a populated continent, the weather systems have been recorded by information points for some time and so accuracy is to be expected (6).

A: Would you believe that supermarkets buy weather advice in order to change their window display on the basis of what will sell more?

B: This led me to the question of the accuracy of short-term

forecasting, since it takes so long for the information to become significant.

C: The British use the weather as a support in conversations.

D: In the UK, on the other hand, the weather systems which influence us most frequently usually come across the Atlantic, which does have information points, but not many of them.

E: Seeing these readings felt almost like eavesdropping over a silent, still-sleeping continent.

F: The Weather Centre provides a computer prediction of when precisely ice will form.

G: So when I was invited to visit the Bristol Weather Centre, I was pleased to accept.

H: Two satellites provide on-screen information direct to PCs.

4. Fill in the appropriate idiom related to weather from the list below:

weather permitting, weather beaten, under the weather, in all weathers, weather the storm.

1. The old sailor's face was …… from all the years he had spent at sea. (aged by the weather).
2. The stadium can be used …… because the roof can be closed when it rains (no matter what the weather is like).
3. We'll go for a picnic on Sunday, …… . Let's hope it's sunny! (if the weather is good).
4. Together we'll …… until things get better (get through difficulties).
5. I didn't go to school because I was feeling …… (not very well).

5. Fill in the appropriate word from the list. Use the word only once:

local, a wide, the flow, orbiting, power, to take, a high profile, showed, a populated.

1. …… around the earth
2. He …… me around.
3. …….. variety of people
4. …… continent
5. …… of information
6. …… generators
7. …….. advice
8. …… activity
9. …… authorities

6. Insert the missing letters:

int…r…st, ob…es…ion, obse…va…ions, …egi…nal, c…asta…, fo…ecas…s, …dge, sate……ites, acc…ra…y, si…nifi…ant, c…paci…y, au...h...rities, gen...rato...s.

7. Unscramble the following words and translate them:

cotonrverisal, mcopeutr, wertahe, foecrasntig, veaesppdroing, ysstmes, sbeoaard, rinalfal, ragne, reelvnat, ostrgae, bosesoins, fof-hsore, rdeingsa, iwrelses, erorst, casotla, mdoelngi.

8. The following words are related to WEATHER. Decide which ones go with GOOD WEATHER and which with BAD WEATHER:

Gloomy, damp, hot, windy, sunshine, bright, lightning, cloudless sky, stormy, snowy, dark sky, gentle wind, sunny, cloudy, blue sky, overcast, warm breeze.

9. Underline the adjective which best describes the following *weather* nouns:

1. fine/heavy drizzle
2. strong/heavy shower
3. sudden/light downpour
4. brief/unending cloudburst
5. powerful/freezing sleet
6. violent/hard hailstorm
7. strong/thick fog
8. loud/thick thunderstorm
9. powerful/mild hurricane
10. brief/destructive typhoon
11. heavy/thin snowfall
12. dense/light rain

10. Fill in with the correct word:

snow, showers, temperature, fog,
sleet, sunny, ice, sunshine.

" …Good evening, my name is Ian Fish.

The good news today is that the weather will be better than yesterday, with less rain and more 1) …..… . The 2) …… will be a few degrees higher, but will drop again from the early evening onwards, getting as low as 2 degrees Celsius.

The weather tomorrow will continue to be unsettled, with 3) …… throughout the day. There should be a few 4) …… periods, but later in the afternoon the showers will be replaced with heavier, more prolonged rain, which will die out later in the evening.

Drivers on Sunday will be hampered by thick 5) …….. and very poor visibility. As the temperature drops, there may also be patches of black 6) …… on the roads, and the AA advises against travelling unless it is

absolutely necessary. Later, rain will turn to 7) …… and possibly 8) …… on higher ground.

Have a good weekend, whatever the weather, wherever you are!"

11. How can the weather affect our moods? Do you know any old fashioned ways of predicting the weather?

12.Imagine you are a TV weather forecaster. Prepare and write the weather forecast for your country for the coming weekend saying that the weather will get worse. Follow the outline below:
Greet viewers – Weather description – Advice – Salutation

Unit 5

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

solar radiation	- сонячна радіація
tiny	- крихітний
fraction	- частинка
penetrate	- проникнути
protective layer	- захисний шар
interfere	- перешкоджати
scattered	- розсіяний
considerable	- значний
to head	- направлятися
albedo	- альбедо
forest-clad	- покриті лісом
greenhouse effect	- парниковий ефект
axis	- вісь

2. Read and translate the following text using a dictionary:

Earth and Sun

The earth receives solar energy from the sun. This **solar radiation** comes chiefly in two forms: short-wave, consisting of light rays we are able to see, and infrared rays, thermal rays whose wavelength is beyond the visible spectrum. As the earth orbits around the sun, 93 million miles (150 million

km) away, it receives a **tiny fraction** of all the heat energy the sun radiates in all directions. But that tiny fraction is enough to **penetrate** the **protective** atmosphere and heat it as well as the land and water of this planet.

When the sun's radiation reaches the earth's outer atmosphere, several processes begin. Molecules of nitrogen and oxygen, dust particles, water vapour, and other contents of the atmosphere **interfere** in various ways with the rays. Some of the radiation is reflected back into space. Some of it is **scattered**. Some of the infrared rays are absorbed by water vapour or carbon dioxide in the atmosphere. Clouds play a **considerable** role in reflecting radiation back into space. On a cloudy day with lots of moisture and a great deal of reflection, as much as two thirds of the radiation **headed** toward the surface of the earth may be lost through these circumstances and processes. And the reflective power or **albedo** of the earth varies greatly from place to place. Ice-covered polar areas reflect as much as 90 percent of incoming short-wave radiation, but **forest-clad** tropical areas reflect as little as 5 to 15 percent.

This latitudinal and locational range in the earth's albedo constitutes a significant factor in the global distribution of heat energy. The solar radiation that does penetrate all the way through the atmosphere (and is not reflected) reaches the surface of the earth and there it is converted into heat. When short-wave rays reach an exposed surface, during a process called **insolation,** they are transformed into long-wave (infrared) rays. This process is accompanied by rising temperature, and the heated surface now **emanates** these long-wave rays. Most of the long-wave radiation that is produced is absorbed by components of the atmosphere, and so the air temperature rises.

Anyone who has seen a distant section of asphalt road **shimmer** in the midday heat has seen these processes going on. Not only is the lowest layer of air heated by long-wave radiation, but conduction, too, raises its temperature. Thus our atmosphere is actually heated from below, not directly by the sun. This is often referred to as the **greenhouse effect** because greenhouses function on the same principle: short-wave radiation passes through the glass, the interior surface is insolated, long-wave radiation is generated and heats the air inside the greenhouse.

Different parts of the earth receive different amounts of the sun's solar energy; **herein** lies the root of a **ceaseless** system of circulation that keeps the atmosphere in motion all the time. The **ultimate** effect of this contrast is familiar enough: equatorial regions are associated with heat, and polar regions display the effects of low-intensity insolation. What brings this about is a combination of factors: (1) the earth's spheroidal shape and (2) the **inclination** of the earth's **axis** of rotation.

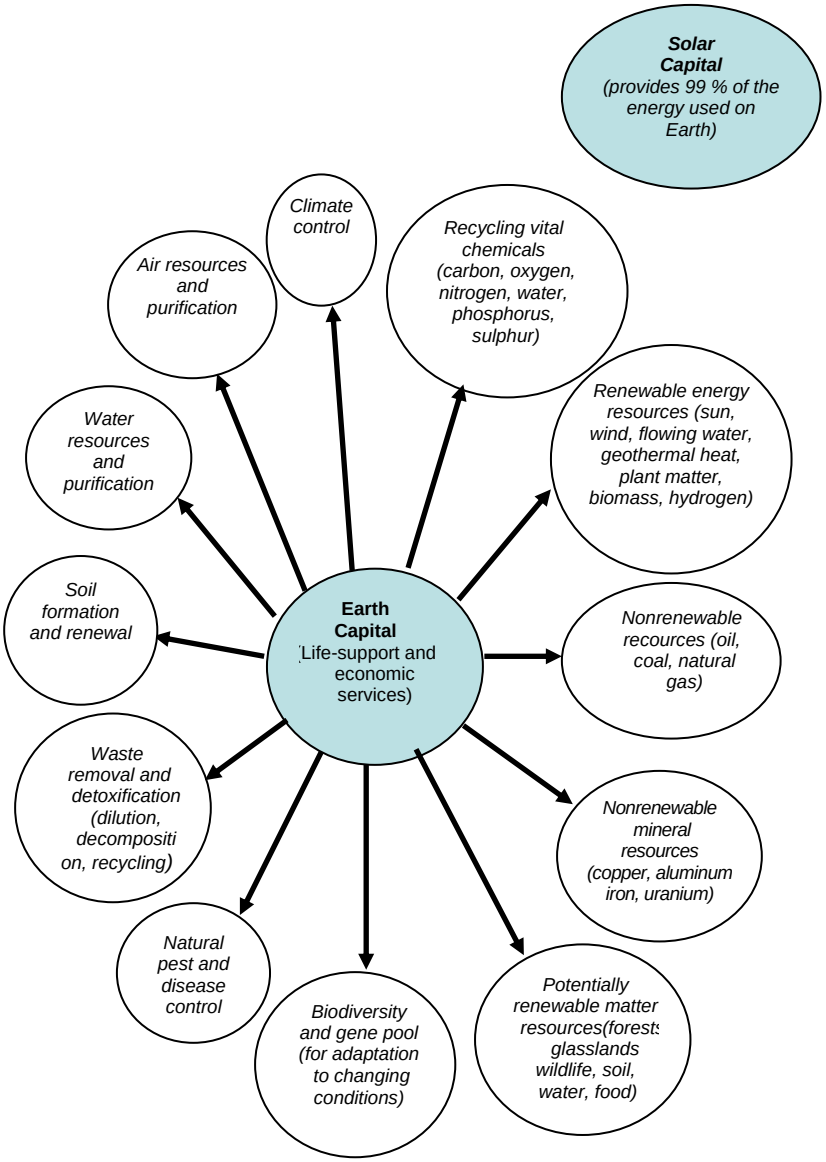


Fig. 2.Solar and Earth capital consists of the life-support systems provided by the sun and the planet for use by us and other species. These two forms of capital support and sustain all life and all economies on Earth

3. Translate the sentences from the text with the words in bold type and then try to unscramble the following words:

oslra rdaiiaton, tniy fcratino, peettnrae, prtecotvie, erfintere, scaertt, cnosidaberle, heaedd, adolbe, froest-acld, inlsoiatno, eamnaet, shiermm, reenguhose feftec, hrieen, eacsssele, utilatme, icnliantino, aisx.

4. Answer the following questions:

a) Where does the earth receive solar energy from?
b) In what two forms does solar radiation come to the earth?
c) Does the earth receive a big amount of solar energy?
d) What processes begin when the sun's radiation reach the atmosphere?
e) What role do the clouds play in reflecting radiation?
f) What is albedo?
g) When are short-wave rays transformed into infrared rays?
h) What is greenhouse effect?

5. Insert the missing letters:

mo…stur…, a…sor…, circu…ati…n, s…heroid…l, c…nduc… …on, shi… …er, pene…ra…e, eq…at…rial, con…tit…te, co…ver…, ex…ose…, pa…tic…es, v…p…r, c…iefl…, cir…ums…ances, in…ra…ed, …aveleng…h, ni…r…gen, ro…a…ion.

6. Put the questions to the following statements:

1. The earth receives solar energy from the sun.
2. The earth orbits around the sun.
3. The earth receives a tiny fraction of all the heat energy the sun radiates in all directions.
4. Molecules of nitrogen and oxygen, dust particles, water vapour, and other contents of the atmosphere interfere in various ways with the rays.
5. Some of the infrared rays are absorbed by water vapour or carbon dioxide in the atmosphere.
6. Clouds play a considerable role in reflecting radiation back into space.
7. Ice-covered polar areas reflect as much as 90 percent of incoming short-wave radiation.

8. Different parts of the earth receive different amounts of the sun's solar energy.
9. Ceaseless system of circulation that keeps the atmosphere in motion all the time.
10. Short-wave rays reach an exposed surface, during a process called insolation.

7. Fill in the correct words from the list below:

fierce rays, hostile conditions, skin, hold, wrapped, actually, band, merges

The earth is ……. In a blanket of gases called the atmosphere. This thin layer protects the Earth from the Sun's …… . And from the …… of outer space. There are five layers in the Earth's atmosphere before the air …… with outer space. The layers …… air and water vapour that support life, and our weather and climate. The Earth's atmosphere is …… a thin …… band around the Earth. If the Earth were an orange, the atmosphere would be as thin as the …… of the orange.

8. Match the word with its explanation:

agricultural cycle	- body of standing water that occupies a depression on the earth's surface and is completely surrounded by land;
biosphere reserve	- water droplets which form on the ground, on plants and other cool surfaces following the condensation of atmospheric water vapour;
dew	- any terrestrial or coastal environment that has been internationally recognised as an area for conservation, study and sustained development;
monsoon	- the seasonal reversal of winds and air pressure systems over continental landmasses and adjacent oceans;
lake	- the sequence and timing of farming activities undertaken during the course of the year, particularly in the production of crops;
rotation	- the imaginary line around which a large round object, such as the Earth, turns;
axis	- when something turns with.

Section 2

Work in pairs. Try to answer the following questions:

What do we know about smaller celestial bodies?
Can comets and meteors be dangerous to life on Earth?
Do you know any hypotheses of Earth's formation**?**

Look through the following text and give its main idea:

Visitors from Space

Comets are far from being the most impressive objects in outer space. They are composed of ice, frozen gases and dust, and are, on average, only about a mile wide. This is very small in comparison to stars, planets and satellites. Scientists often describe comets as "dirty snowballs". Yet, these drab space objects have inspired a mixture of awe and terror in people down through the ages. After seeing a comet flash across the sky, people in the past did not know whether to wonder or to tremble.

What is there about comets that could have caused such a reaction? Why should they have been thought of as an omen of disaster? Well, it wasn't until the 1500s that astronomers discovered that comets were real heavenly bodies. Even then, they had no idea where they came from.

Until explorers began to sail the oceans and discover new lands on the other side, people believed that the Earth was flat and that angels rotated the stars in the heavens. From that viewpoint, it is easy to see why people were convinced that comets had to be some kind of sign or warning signal.

The physical appearance of the comets themselves also inspired awe and fear in those who saw them. While the core of a comet is small, its tail is enormous. Comets orbit the sun. When one is far away from the sun, it is nothing more than a ball of ice in cold storage. But when it approaches the sun it begins to heat up. The ice turns immediately into gas. A halo of gas, called a coma, forms around the core. As the comet warms up, particles of it begin to break away. These particles form a brilliant tail many millions of miles long, which streams out behind the comet as it streaks through space. It is the sight of this glowing tail lighting up the sky that struck terror in the hearts of so many people.

The most famous of all comets is Halley's Comet. Named after Edmond Halley, who first identified it, Halley's Comet is best known to us because it makes an appearance on a regular basis. It comes around about every seventy-six years. Like other comets, Halley's Comet has a very long, slender orbit. This orbit takes it breathtakingly close to the sun. After

whipping around the sun, the comet shoots out into the darkness again. For about thirty-eight years, Halley's Comet plunges through the colder outer depths of our solar system. Then the gravity of the sun begins pulling it back in our direction again. At the far end of its orbit, Halley's Comet is five hundred times farther away from the sun than is Pluto, the most distant planet in our solar system.

Halley's Comet is one of a handful of comets that can be seen with the naked eye. The last visit by Halley's Comet was in 1986.

Look at the three statements below.

One expresses the main idea of the story. A good main idea statement answers two questions: it tells who or what is the subject of the story, and it answers the understood question does what? or is what? Another statement is too broad, it is vague and doesn't tell much about the topic of the story. The third statement is too narrow, it tells about only one part of the story.

Match the statements with the three answer choices below:

1. Halley's Comet caused a great deal of excitement world-wide when it came around in 1910.
2. Throughout history people have been fascinated by the celestial bodies.
3. Comets have been viewed with a mixture of terror and excitement because of their infrequent but spectacular appearances.

4. Answer the following questions:

1. What do you know about comets?
2. What is a comet?
3. What did people in the past think when they saw comets in the sky?
4. In what way does a comet look like?
5. Can people see comets with the naked eye?
6. What is the name of the most famous of all comets?

5. Chose the appropriate variant to finish the sentences:

1. Ancient people thought that the appearance of a comet
   a) was a sign of good fortune
   b) was some kind of warning
   c) brought special blessings
2. A comet's tail is
   a) about one hundred miles long
   b) about one thousand miles long
   c) many millions of miles long

3. One orbit of Halley's Comet takes about
   a) 38 years
   b) 76 years
   c)500 years

6. Are the statements true or false? Write F-for *false* and T-for *true.*

1. Ancient people did not know that comets made regular orbits around the sun.
2. All comets follow the same orbit.
3. The length of the comet's tail remains about the same throughout its orbit of the sun.
4. There is absolutely no chance that the Earth will ever be hit by a comet.
5. The more people know about comets, the less they fear them.

7. Each of the numbered sentences below contains a word or phrase from the story in italics. Under the sentence there are three definitions. One has the same meaning as the underlined word or phrase, one has almost the same meaning, and one has the opposite meaning. Match the definitions with the three answer choices by writing the letter that stands for each answer:

S-same A-almost the same O-opposite

1. Yet, these drab space objects have inspired a mixture of *awe* and terror in people down through the ages.
   a. interest and uneasiness
   b. wonder and dread
   c. peacefulness and boredom
2. Why should they have been thought of as an *omen* of disaster?
   a. warning sign
   b. indication
   c. scientific forecast
3. When Halley's Comet came into view in 1910, people acted in the most *bizarre* manner.
   a. common, sensible
   b. odd, eccentric
   c. unusual
4. The chances of that happening are very slim. Yet, for some people, even *a long shot* is enough to bring on a panic.
   a. extremely slim possibility

b. strong possibility
c. unlikely chance

5. Yet, some people managed to convince themselves that the particles of the tail would poison the Earth's atmosphere and *extinguish* all life.
a. endanger
b. snuff out
c. improve

8. Match the word with its explanation:

awe - a feeling of great respect and liking for something;
handful - a sign of what will happen in the future;
omen - a sudden event such as a flood, storm, or accident which causes great damage or suffering;
disaster - a very small number of things;
core - the central part of any planet;
orbit - the curved path travelled by an object which is moving around another much larger object.

Unit 6

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

liquid	- рідинний
mixture	- суміш
climate scientists	- учені-кліматологи
fraction	- частина
consequences	- наслідки
onset	- початок
prevail	- переважати
industrial revolution	- індустріальна революція

2. Read and translate the following text using a dictionary:

The Atmosphere

The atmosphere is the gaseous layer that lies upon the liquid hydrosphere and the solid crust. The atmosphere of the earth consists of a mixture of gases that includes nitrogen (over 78 percent), oxygen (nearly 21

percent), and argon (less than 1 percent). The remaining fraction consists mainly of carbon dioxide, a very significant component of the atmosphere because it absorbs long-wave radiation from the earth's surface, thus sustaining the atmosphere's warmth. It does this far more effectively than nitrogen or oxygen, so that the amount of carbon dioxide present in the atmosphere is an important factor in air temperature. In recent decades – indeed, ever since the onset of the Industrial Revolution-factories, automobiles, and other burners of coal, petroleum, and gas have been pouring carbon dioxide into the atmosphere from smokestacks and exhausts. The long-range effect of this on global atmospheric temperatures is unknown, but climate scientists are concerned that a delicate balance of nature is being upset with consequences that could be serious.

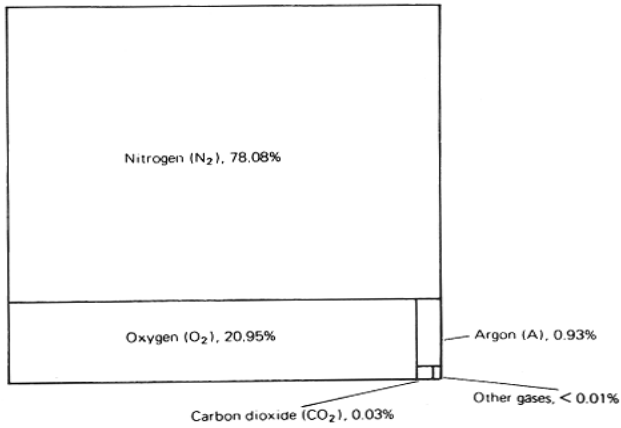


Fig. 3.Composition of dry air near ground level. The figures given are percentages by volume. Water vapour is also present in the atmosphere ar concentration that vary from nearly 0 to as much as 4 percent

The atmosphere's nitrogen, oxygen, argon, and carbon dioxide are identified as the non-variant gases, because they prevail in approximately the same proportion from sea level to about 50 miles (80 km) into space. (The changing quantity of carbon dioxide is a human modification, not nature's design). Other gases, however, can exist in the atmosphere in varying amounts. Two important variant gases are water vapour – prevailing at under 1 percent by volume in desert areas but at 3 to 4 percent in humid equatorial

zones – and ozone – a form of oxygen concentrated in very small but important quantities in a layer between 10 and 30 miles (about 15 and 50 km) above sea level. Water vapour, of course, is crucial in the atmosphere's capacity to absorb, transfer, and discharge moisture. Without water vapour there would be no clouds, no rain– and little agriculture. Ozone has the ability to absorb ultraviolet solar radiation, the kind that produces suntans but, in excess, blindness and skin cancers. The damage done to the ozone layer of the atmosphere by the engines of high-flying aircraft is another area of practical concern.

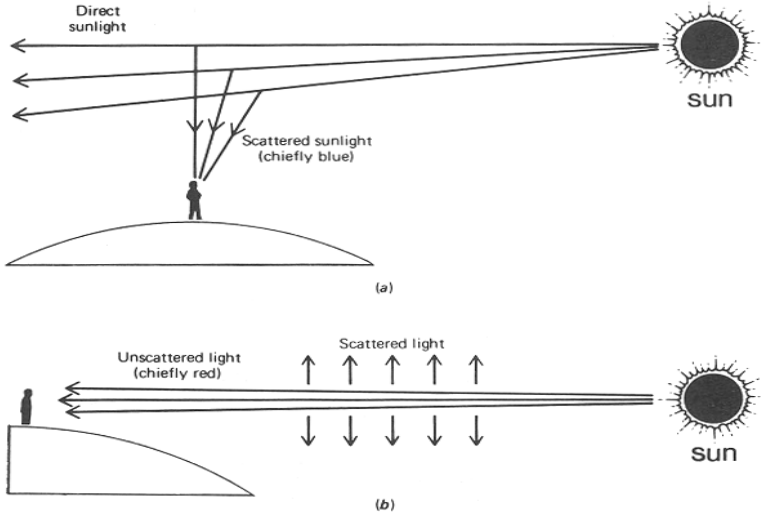


Fig. 4.*(a)* The preferential scattering of blue light in the atmosphere is responsible for the blue colour of the sky. *(b)* The remaining direct sunlight is reddish, which is the reason for the red colour of the sun at sunrise and sunset

Like the other spheres of our multi-layered earth, the atmosphere consists of several distinct layers. This layering is not based on any change in the composition of the air, because this remains the same until 50 miles (80 km) out in space. Nor does the atmosphere's density decrease in stages. The key to the recognition of atmospheric layers lies in temperature changes.

It is reasonable to expect that air temperature will decrease with altitude. Permanent snow on the highest mountains, even in equatorial

regions, appears to confirm this principle. The rate of decrease, 3.5°F/1000 ft (6.4°C/1000 m), has been long known and is referred to as the environmental lapse rate (sometimes the normal lapse rate). But when balloons carrying recording thermometers were sent higher than the highest mountains, they brought back some amazing data. At a height of 8.25 to 9 miles (13 to 14 km) temperatures stopped declining and, after briefly holding steady, they actually began to rise. At first, no one believed that this was actually the case. But eventually the fact was established: beyond about 9 miles (14 km) above sea level, where the temperature has dropped to about -76°F (-60°C), the mercury rises slowly until at about 30 miles (50 km) above sea level, it is back up to 32°F(0°C).

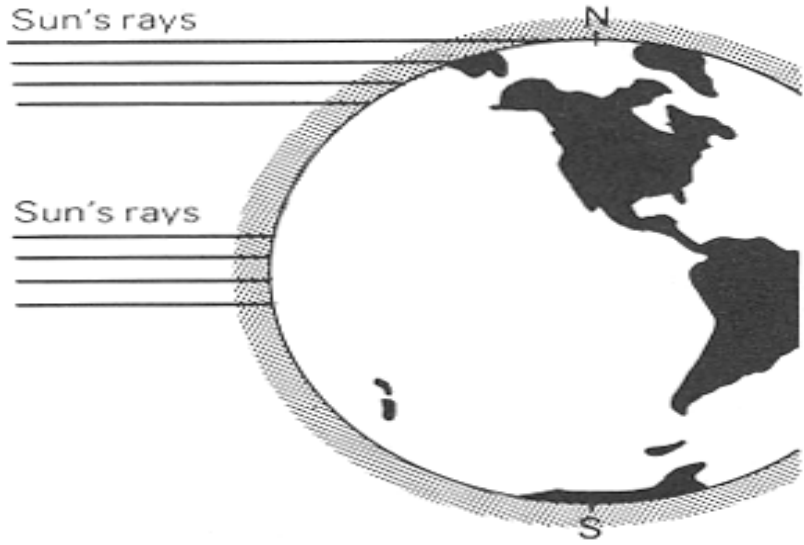


Fig. 5.Air near the equator is on the average much warmer than air near the poles because the sun's vertical rays at the equator are more effective in heating the surface than the slanting rays of polar regions

3. Answer the following questions:

1. What is atmosphere?
2. What is the chemical composition of the atmosphere?

3. Why is carbon dioxide very important?
4. What are climate scientists concerned with?
5. What are non-variant gases?
6. What are variant gases?
7. What is the function of water vapour in the atmosphere?
8. What is the function of ozone?
9. What is environmental lapse rate?

4. Put questions to the following statements:

1. The atmosphere is the gaseous layer that lies upon the liquid hydrosphere and the solid crust.
2. The atmosphere of the earth consists of a mixture of gases that includes nitrogen, oxygen, and argon.
3. Climate scientists are concerned that a delicate balance of nature is being upset with consequences that could be serious.
4. Like the other spheres of our multi-layered earth, the atmosphere consists of several distinct layers.
5. At a height of 8.25 to 9 miles (13 to 14 km) temperatures stopped declining and, after briefly holding steady, they actually began to rise.

5. Fill in the correct words from the list below:

wrapped, hostile, support, layer, orange, fierce, photosynthesis, breathe, merges, hold, band, store.

The Earth is …… in a blanket of gases called the atmosphere. This thin …… protects the Earth from the Sun's …… rays and from the …… conditions of outer space. There are five layers in the Earth's atmosphere before the air …….. with outer space. The layers …… air and water vapour that …… life, and our weather and climate. The Earth's atmosphere is actually a thin …… around the earth. If the earth were an …… , the atmosphere would be as thin as the skin of the orange. A vast …….. .Of oxygen exists in oceans, rocks, and the atmosphere. Oxygen created by plant …… .Balances oxygen used up when animals …… .

6. Match the word with its explanation:

concentration - ten years;
atmospheric layers - close gathering;

decade	- gradual raising of the temperature of air in the lower atmosphere;
decline	- important;
depletion	- to have a share of;
contribute	- emptying smth of smth important;
rate	- a combination of substances;
mixture	- move from better to worse;
significant	- the speed at which something happens over a period of time;
greenhouse gas	- layers of gases in the sky that prevent harmful radiation from the sun from reaching the Earth.

7. Match a word in A with a word in B and translate the word-combinations obtained:

A	**B**
equatorial	level
sea	component
significant	layer
gaseous	fraction
remaining	temperature
long-wave	balance
air	data
long-range	regions
climate	effect
delicate	scientists
amazing	radiation

Section 2

1. Look at these questions:

a) What is the main task of the atmosphere?

b) What is the difference between *weather* and *climate?*

Read the passage through and find the answers to the questions. Remember, you do not have to understand every word to answer them.

The Dynamic Atmosphere

The science of meteorology is concerned with what may be thought of as a vast, automatic air-conditioning system. Our spinning planet is heated strongly at the equator, feebly at the poles, and its moisture is concentrated in the great ocean basins. It is the task of the atmosphere, from our point of view, to redistribute this heat and moisture so that large areas of the land surface will be habitable. Air conditioning by the atmosphere is far from

perfect; it fails miserably in desert regions, on mountain summits, in far northern and southern latitudes. On sultry nights in midsummer or on bitter January mornings we may question its efficiency even in our favoured part of the world. But the atmosphere does succeed in making a surprisingly large amount of the earth's surface fit for human habitation.

The two chief functions of any air-conditioning system are the regulation of air temperature and humidity. In addition to these, we expect the atmosphere to perform a third function: it must provide us at intervals with rain or snow. The weather and climate of a given locality describe how effectively these functions are performed. *Weather* refers to the temperature, humidity, pressure, cloudiness, and rainfall at a certain time; *climate* is a summary of weather conditions over a period of years. Important in a description of climate is the variability of temperature and rainfall with the seasons; an outstanding feature of the climate of North Dakota is its extreme warmth in summer and extreme cold in winter, whereas the climate of southern California is characterised by equable year-round temperatures and by a concentration of rainfall in the winter months. Local barometric pressures and the intensity and direction of wind may be important in descriptions of weather and climate.

2. Put questions to the following statements:

1. The science of meteorology is concerned with an automatic air-conditioning system.
2. Our spinning planet is heated strongly at the equator, feebly at the poles, and its moisture is concentrated in the great ocean basins.
3. Air conditioning by the atmosphere it fails miserably in desert regions, on mountain summits, in far northern and southern latitudes.
4. Local barometric pressures and the intensity and direction of wind may be important in descriptions of weather and climate.

3. Look at the first paragraph and say which words have the opposite meaning to:

very small
strongly
well/happily
very hot

4. Look at paragraph 3 and say which words you could replace with:

place
changeability

very great

5. Match the word with its explanation:

meteorology - the amount of water contained in the air;
the equator - the distance north or south of the equator, measured in degrees, or an area at a particular latitude;
moisture - warmth, very hot weather or a high temperature;
heat - small amounts of water that are present in the air or on the surface;
latitude - an imaginary line drawn around the middle of the Earth that is exactly the same distance from the North Pole and the South Pole;
humidity - the scientific study of weather conditions;
rainfall - the temperature and other conditions such as sun, rain, and wind;
variability - the typical weather conditions in a particular area;
weather - the amount of rain that falls on an area in a particular period of time;
climate - ability to be changed sometimes for good and sometimes for bad.

6. Insert the missing letters:

midsu……er, e…uabl…, clo…dine…s, ba…omet…ic, …oca…ity, descri-…t…ons, f……bly, ha…ita…le,d...se...t, re…istri…ute, su…its, mise-…abl…, rainfa....., cond…t…ons, h…mi…ity, v…st, …ir, conditi…ning, ad…itio…, spi……ing.

7. Fill in the spaces with correct form of the word given, where these exist:

Noun	Verb	Adjective
Atmosphere	……	……
……	Radiate	……
……	Prevent	……
Absorption	……	……
……	……	Average
Region	……	……
Loss	……	……
……	……	Present
……	Influence	……
Energy	……	……

Weather conditions

Look at this list of common weather words. Notice that it is very common to form adjective by adding "-y".

Noun	*Adjective*	*Noun*	*Adjective*
Sun	sunny	wind	windy
Cloud	cloudy	ice	icy
Fog	foggy	shower	showery
Heat	hot	humidity	humid

NOTE!
When it rains for a short period of time, we call it a shower, e.g. We had several showers yesterday afternoon.
When it is raining a lot we often say it's pouring or it's pouring with rain. This phrase is much more common than "it's raining cats and dogs".

Temperature

Boiling> hot> warm> not very warm> cold (also chilly)> freezing (=very cold)
People round the world have different ideas about temperature:
5^0C (five degrees Centigrade) is freezing for many Brazilians. -10^0C (minus ten degrees or ten degrees below zero) is very cold but quite normal in the mountains in Switzerland during the winter when it usually snows a lot. 30-35^0C is boiling for England and very unusual, but it is very common in parts of Spain during the summer.

Wind

The first word here is very gentle, the last is more than 100 km per hour and can be very dangerous.
A breeze> a wind > a strong wind> a gale > a hurricane
It was a hot day but there was a lovely breeze.
The wind blew my hat off.
The hurricane in Florida destroyed trees and buildings.

Thunderstorms

A spell (=period) of very hot weather often ends with a thunderstorm. First it becomes very humid (=hot and wet), then you get thunder and lightning, and finally, very heavy rain (=it pours with rain). Afterwards, it is usually cooler and it feels fresher.

8. *True or false?* If a sentence is *false*, write a *true* sentence about the weather conditions in the sentence:

1. It often pours with rain in the desert.

2. It gets quite chilly in the desert in the evening.
3. Thunder makes a noise.
4. Lightning can kill people.
5. A shower is a gentle breeze.
6. A spell of hot weather may end in a thunderstorm.
7. If it is humid, the air will be very dry.
8. Below zero, water turns to ice.
9. Heavy rain means that it is pouring with rain.
10. When it is foggy you need sunglasses.

9. Complete the text with suitable words:

The single greatest influence on Japanese weather is the wind. During the summer it …….. from the pacific, causing …… and humid weather, but in winter, the north-westerly …… from Siberia are very cold and it …… heavily on the mountains of the north west. The south-eastern parts receive cold dry air. Between June and mid July, there is a …… of wet weather when the rice fields get the water vital for growth. After that, there is less …….. rain, but the air is still …… . Autumn, however, is drier, and usually very pleasant.

Read and translate the text using the explanation below:

Cold weather

In Scandinavia, the **chilly** (1) days of autumn soon change to the cold days of winter. The first **frosts** (2) arrive and the roads become icy. Rain becomes **sleet** (3) and then snow, at first turning to **slush** (4) in the streets, but soon **settling** (5) with severe **blizzards** (6) and **snowdrifts** (7) in the far north. Freezing weather often continues in the far north until May or even June, when the ground starts to **thaw** (8) and the ice **melts** (9) again.

(1) cold, but not very, (2) thin white coat of ice on everything (3) rain and snow mixed (4) dirty, brownish, half-snow, half-water, (5) staying as a white covering, (6) snow blown by high winds, (7) deep banks of snow against walls, etc., (8) change from hard, frozen state to normal, (9) change from solid to liquid under heat.

Unit 7

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

hydrologic cycle	- гідрологічний цикл
evaporation	- випаровування
unceasing	- безперервний
trade(s winds)	- пасатні вітри
precipitation	- опади
seep	- просочитись
runoff	- витік
humidity	- вологість
surplus	- надлишки
deficit	- дефіцит
water balance	- водний баланс

2. Read and translate the following text using a dictionary:

The Hydrologic Cycle

The water of the oceans and the air of the atmosphere combine to deliver enormous quantities of moisture to the landmasses in an unceasing system called the hydrologic cycle. The hydrologic cycle could not take place if water could not change from the liquid state to the vapour state and back again to the liquid state (and even, as ice, to the solid state). When the surface of the ocean is in contact with an air mass, evaporation takes place, and water in the vapour state becomes part of the atmosphere. Evaporation rates are higher where temperatures are high, and warm air can contain much more moisture than cold air can, so that air masses in equatorial zones are typically humid, whereas polar air masses are dry. Once the water vapour has entered the air mass and the air continues its movement in the trades, westerlies, or some other pressure system, it may reach a landmass and overspread it. By various processes the moisture in the air now condenses and falls on the land as precipitation. On reaching the land surface, some of this precipitation evaporates back into the air again–from the leaves of vegetation, from the soil, and from the surfaces of lakes and rivers. Part of it seeps into the soil to become ground water, but much of this eventually drains into lakes and streams and even back into the ocean itself. And part of the precipitation becomes runoff, flowing directly into streams that carry it back to the ocean as well. As the water drains back into the ocean it mixes with the passing current, and eventually it may evaporate back into the air again. Then the whole circulation system is renewed.

In this way the hydrologic cycle serves as a giant, worldwide pumping system that brings life-giving water to even the deepest interiors of the continents.

The hydrologic cycle is a global system, and it is difficult to measure its components. When climate scientists began to record precipitation**,** humidity (moisture in the air), seepage in soils, runoff in streams, evaporation, and other measurable processes in various areas on land and sea, they made an important discovery: some areas have what may be called a water surplus**,** others have a deficit. This in itself is not surprising – the landscape and vegetation give strong indications of this. But what was surprising was that large areas that would seem to have a surplus actually do not or have it only seasonally. This gave rise to the concept of water balance, the annual (or seasonal) water budget of a locale.

Equatorial zones are best supplied with water and have a favourable water balance. But moving north and south from the equatorial zone into the tropics, we find large areas between 10° and 40° latitude that have a negative balance – and not just desert areas.

3. Answer the following questions:

1. What is the hydrologic cycle?
2. What is a necessary condition for hydrologic cycle to happen?
3. When does evaporation take place?
4. Where are evaporation rates higher?
5. What happens with precipitation when it reaches the land surface?
6. What is the function of hydrologic cycle?
7. What important discovery did climate scientists make?
8. What zones are best supplied with water?

4. Put questions to the following statements:

1. The water of the oceans and the air of the atmosphere combine to deliver enormous quantities of moisture to the landmasses.
2. The hydrologic cycle could not take place if water could not change from the liquid state to the vapour state and back again to the liquid state and even to the solid state.
3. Air masses in equatorial zones are typically humid.
4. Equatorial zones are best supplied with water and have a favourable water balance.
5. The hydrologic cycle serves as a giant, worldwide pumping system that brings life-giving water to even the deepest interiors of the continents.

5. Insert the missing letters:

…vaporatio…, we…terl…es, …eg…tation, la…i…ude, p…eci…itation, in…erior…, s……page, mea…ura…le, an…ua…, …udge…, c…rr…nt, e…orm…us, con…en…e, equ…tori…l, scien…is…s, unc……sing, s…re…ms, ru…o…f, hu…idi…y, disco…ery, atom…phe…e, o…erspre…d.

6. Fill in the correct words from the list below:

rises, severe, moisture, passes, circulates, droplets, level, smoke, fuels, blown, cools, fog.

Clouds

Air …… as it warms, as it …… over mountains, or when it is …… upwards by cool air. Rising air …… condenses, and forms clouds of water …… There are three cloud levels: cirrus form at the highest level, alto in the middle, and stratus at the lowest …… Clouds that form at ground level are known as …… Fog, mixed with smoke from burning …… produce smog. Earlier this century, London, England suffered from …… smog.

Cloud formation

1. The land warms. The Sun warms the land on a clear day. Air near the ground is warmed and rises.
2. A cloud is formed. As the warm air rises, it cools. The moisture it contains condenses and forms a cloud.
3. Growing clouds. Fleecy clouds appear in the sky. They get bigger and cool air circulates inside them.
4.

Cloud types:

Cirrus – wisps of cloud made of ice crystals, about 12,000 m high.
Cirrocumulus – forms at about 9,000 m, rippled ice crystal cloud.
Cumulonimbus – dark, storm cloud with rain.
Altocumulus – layers or rolls of fluffy cloud.
Altostratus – grey or white sheet of cloud forms between 2,000 m and 6,000 m.
Stratocumulus – layer at the top of cumulus cloud.
Cumulus – large, white, heaped, fluffy cloud.
Nimbostratus – low, rain cloud under 2,000 m.

Stratus – low-level, flat, grey sheet of cloud.

NOTE!
Cloud cover is measured in oktas. On weather maps a partially shaded circle represents cover.

7. Match the word with its explanation:

drizzle	- an area of permanent snow in high latitudes or mountainous regions from which glaciers originate;
lightning	- fine rain where the water droplets have a diameter of less than 0.5 mm;
monsoon	- visible flash of electrical discharge within the clouds of a thunderstorm;
hail	- the seasonal reversal of winds and air pressure systems over continental landmasses and adjacent oceans;
snowfield	- precipitation in the form of small pellets of ice with diameters usually ranging from between 5 and 50 mm.

Section 2

1. Think of the following questions and try to answer them:

1. What to your mind is ecological disaster?
2. What factors can lead to is ecological disaster?
3. In what way do people destroy water resources?
4. What can people do to protect themselves from ecological disaster?

2. Read and translate the following text using a dictionary:

Conflict reduces once mighty Jordan to a trickle

Once it was the mighty Jordan river, a crossroads of civilisations and continents, and a favourite of pilgrims seeking baptism in its waters. Now just about the only thing that flows for large parts of the year, keeping the river alive, is sewage.

Decades of competition for water have turned the lower Jordan river, running between the Sea of Galilee and the Dead Sea, into little more than a drainage ditch. Dams and pumping stations have diverted almost 90 % of the river's water to leave parts of the surrounding valley and the Dead Sea on the brink of ecological disaster.

Last month Israel's environment minister and Jordanian royalty met at a small island in the river to discuss the crisis. But the only area of agreement

between them was that the most obvious solution – restoring the original water supply - is not even up for discussion.

The Jordan river provides Israel with nearly a third of its water supply, and Jordan relies on dams to sustain agriculture in the area. With demand ever increasing for the most precious commodity in the region, neither country is prepared to give up a drop.

"Unfortunately, environmental policies are governed by politics", said Jordan's Prince Hassan. "We don't have a comprehensive peace, but I don't see why we have to continue with the policy of mutually assured destruction of the environment and resources".

Fifty years ago 1.3 bn cubic metres of water flowed through the lower Jordan each year. Today environmentalists say that if 200 m cubic metres travel the lower Jordan then it is a good year, and nearly half of that is raw sewage, the effluent from commercial fish farms and other untreated waste water. Ironically, it is sewage that is maintaining what little biodiversity there is along the Jordan. Right now the sewage is the only thing keeping the river flowing at times. It feeds life there. But at the lower end of the Jordan the pollutants spill into the Dead Sea, compounding an environmental crisis there that has seen the famed sea's level drop 25 metres.

The Jordan river crisis is a direct result of decades of conflict. Each side tried to grab as much of the resources as they can without any consideration of the consequences. It started in the 1960s with Israel ceasing the flow of the upper Jordan into the lower Jordan. Syria tried to build a dam at the same time to stop water coming down the Jordan river. Jordan in the 1970s built a canal to capture the main tributary into the river. It escalated from there.

The existing problems are compounded by Amman's construction of a new dam on the Yarmuk river, the largest tributary of the Jordan. The straightforward solution – practically if not politically – is to divert less water, but almost everyone involved with the discussions said that was unlikely to happen because of political considerations and the sheer demand for water.

3. Put questions to the following statements:

1. Decades of competition for water have turned the lower Jordan river, running between the Sea of Galilee and the Dead Sea, into a drainage ditch.
2. The Jordan river provides Israel with nearly a third of its water supply.
3. Last month Israel's environment minister and Jordanian royalty met a small island in the river to discuss the crisis.

4. Fifty years ago 1.3 bn cubic metres of water flowed through the lower Jordan each year.
5. At the lower end of the Jordan the pollutants spill into the Dead Sea.
6. The Jordan river crisis is a direct result of decades of conflict.
7. Syria tried to build a dam to stop water coming down the Jordan river.

4. Match the word with its explanation:

crossroads	- liquid waste, especially chemicals or sewage;
sewage	- a stream or river that flows into a larger river;
drainage ditch	- a substance that makes air, water, soil dangerously dirty, and is caused by cars, factories, etc;
dam	- a product that is bought and sold or useful thing;
effluent	- an important or central place;
pumping stations	- an amount of water that is available to be used;
water supply	- a station which is used to make liquid move in a particular direction, using a pump;
tributary	- the mixture of waste from the human body and used water that is carried away from houses by pipes under the ground;
pollutants	- the system which is a long narrow hole to remove unwanted water and by which water or waste liquids flow away;
commodity	- a special wall built across a river or a stream to stop the water from flowing, especially to produce electricity.

5. Match a word in A with a word in B and translate the word-combinations obtained:

A	**B**
large	considerations
drainage	disaster
water	ditch
pumping	minister
ecological	parts
surrounding	problems
environment	solution
obvious	stations

existing	supply
political	valley

6. Using words from the text, can you complete the following statements?

straightforward solution, raw sewage, ecological disaster, environment, water supply, sustain, surrounding valley, crisis, effluent, river flowing, pumping stations, waste water, environmentalists, biodiversity, pollutants, dams, spill, divert, sheer demand

1. …… and …… have diverted almost 90 % of the river's water to leave parts of the …… and the Dead Sea on the brink of …… .
2. Israel's …… minister and Jordanian royalty met at a small island in the river to discuss the …… .
3. The Jordan river provides Israel with nearly a third of its …… , and Jordan relies on …… to …… agriculture in the area.
4. Today …… say that if 200 m cubic metres travel the lower Jordan then it is a good year, and nearly half of that is …… , the …… from commercial fish farms and other untreated …… .
5. It is sewage that is maintaining that little …… there along the Jordan, the only thing keeping the …… at times. It feeds life there.
6. At the lower end of the Jordan the …… …… into the Dead Sea, compounding an environmental …… there that has seen the famed sea's level drop 25 metres.
7. The …… is to …… less water, but that is unlikely to happen because of political considerations and the …… for water.

7. Unscramble the following words and translate them:

iviclzsatioin, fevoiaurt, lpoitiyclal, cronssideoatin, ievrontnmeanl, lagericuutr, mlyutlua, rolniicyal, rsuironugdn, ncostcruonti, wesaeg, pedovri, camomceril, irvdet, drgaiane, llvaey, ouvibos, cmoprevenhsie, pesrcoiu, eflefunt, tiybruatr, cousesnqecne, gerstroin, idthc, ploalutnst, crpatue.

Unit 8

Section 1

1. Learn the following words and their translations. Check up yourself by back translation :

lava	- лава
solidify	- затвердіти
accumulation	- накопичування
label	- маркірувати
delta	- дельта
subdivide	- підрозділяти
bit by bit	- крок за кроком
rock	- гірська порода
fossils	- скам’янілість
glaciation	- сковування кригою

2. Read and translate the following text with the help of a dictionary:

The Earth and Time

Rocks sometimes form almost overnight, for example, when a lava flow cools and solidifies. But other rocks are deposited over thousands, even millions of years. When geologists began to realise that there is a degree of order in the massive accumulations of rocks that make up the earth's crust, they realised that it was necessary to establish a timetable according to which newly identified rocks could be permanently labelled. The geologic time scale was first developed more than a century and a half ago by British geologists. They were able to see how a geologic cross section of England involved several discrete phases of accumulation of rocks and deformation by bending and breaking of the crust. They called the oldest sequence of rocks they were able to recognise the Primary and the next two the Secondary and Tertiary. Later the very youngest rocks such as sediments now accumulating in river deltas were separately identified as Quaternary. If we used these original terms, our geologic time scale would logically look like the following:

4. Quaternary	(Recent)
3. Tertiary	(Young)
2. Secondary	(Intermediate)
1. Primary	(Oldest)

Field research in the decades after the establishment of the first geologic time scale produced such a vast quantity of detail that it soon became necessary to subdivide these original major units. Bit by bit, the geologic time scale became more exact, and more complicated. More was

learned about fossils and correlations were made with discoveries in distant countries. How important the discoveries pertaining to the evolution of life were can be seen from the names in the geologic time scale now in use: Primary has become Paleozoic (era of ancient life); Secondary is now Mesozoic (era of medieval life). We can still find Tertiary and Quaternary in the modern time scale, but they are now subdivisions of a third great era, the Cenozoic (era of recent life). It has also been realised that there are rocks older than the Paleozoic (older than about 600 million years); surprisingly, this era is not called the Prepaleozoic, as would seem reasonable, but Precambrian, which means that it is older than the oldest period of the Paleozoic.

It is useful to become well acquainted with at least the eras and periods because geologists and physical geographers use these terms about as commonly as we refer to the months of the calendar and this is not surprising, for the youngest rocks tend to be closest to the surface. Some of them still are being deposited; others such as those layers left in the northern United States and Canada during a recent glaciation are fresh and have hardly changed, geologically speaking.

3. Answer the following questions:

1. Why was it necessary to establish a timetable to label the rocks?
2. How long does it take for the rock to form?
3. Who developed and when the first geologic time scale?
4. What was the sequence of rocks called?
5. What are the four main geologic periods?
6. What are modern names of the geologic periods?
7. Why is it useful to know geologic eras and periods?

4. Put questions to the following statements:

1. Rocks sometimes form almost overnight when a lava flow cools and solidifies.
2. Geologists realized that it was necessary to establish a timetable according to which newly identified rocks could be permanently labelled.
3. Field research in the decades after the establishment of the first geologic time scale produced a vast quantity of detail.
4. It is useful to become well acquainted with the eras and periods

because geologists and physical geographers use these terms about very commonly.

5. Unscramble the following words and translate them:

Lava, geographers, establishment, geologists, permanently, necessary, physical, glaciation, subdivisions, surprisingly, deposit, pertaining, era, refer, time scale, ancient, unit, solidify.

6. Fill in the correct words from the list below:

igneous, molten magma, melt, solidifies, intrusive, erupts, surface, underground, constantly, crustal, hardens, surrounding, particles, metamorphose, weakened, carried off, layers, cement, environment, chipped, sharp, hand, millions, remains, limestone, fossils, constantly, creatures, unchanged, swamps, seed plants, reptiles, remade, melt, pressure, building, texture.

Igneous rocks

"Fiery" or …… rocks such as granite and basalt originate from …… . The magma is produced deep inside the Earth where rocks ……. in the heat of the mantle and crust. Magma that cools and …… under the Earth's …… forms intrusive igneous rocks. If it …… as lava from a volcano and then cools on the surface of the Earth, it is known as extrusive igneous rock. Sugar Loaf Mountain, Brazil formed from magma that solidified …… Eventually, the …… rock eroded leaving this dome shape.

Igneous Rock Facts

*Basalt makes up most of the ocean floor.
*Obsidian was used in early jewellery and tools.
*Most continental igneous rocks are quartz, feldspar, and mica.
*Earth's first rocks were igneous rocks.

Some igneous rocks. These have solidified from a molten state. Table 1

Mineral composition	***Coarse-grained rocks (intrusive)***	***Fine-grained rocks (extrusive)***
Quartz		
Feldspar	***Granite***	***Rhyolite***
Ferromagnesian minerals		
No quartz		
Feldpar predominant	***Diorite***	***Andesite***
Ferromagnesian minerals		
No quartz		
Feldspar	***Gabbro***	***Basalt***
Ferromagnesian minerals predominant		

Sedimentary Rocks

Rock is gradually …… by the weather. Particles of rock are then …… by rain or wind. These …… build up into …… of sediment. Sediment combines with plant and animal debris and …… Water in the ground can help to …… the sediment and turn it into rock (a process known as lithification). By studying sedimentary rock layers, scientists can uncover the …… of the past. Prehistoric people fashioned tools from a sedimentary rock called flint. Flint was …… into shape using a stone. It is a common rock that flakes easily, leaving a …… edge. Prehistoric tools such as …… axes have been found.

Sedimentary facts

*Chalk consists of shells, visible only under a microscope.
*Mudstone forms from compressed mud grains, and sandstone from compressed sand grains.
*Oil is usually found in permeable and porous sandstones.

Fossils

Plant and animals that lived …… of years ago are preserved in rocks as fossils. A fossil is the …… of an organism, a cast of an animal or plant made from minerals, or even burrows or tracks left by animals and preserved in rock. Sedimentary rocks such as …… or chalk hold fossils. Paleontologists are scientists who study …… .

Fossil facts

*The earlier dinosaur, a Herrerasaurus, was found in Argentina in 1989 and dated at 230 million years old.
*The largest fossil footprint was left by a hadrosaurid. It is 1.36 m long.
*Fossils of cells are the first evidence of life, 3,200 million years ago.
The Ages of the Earth
The Earth's history divides into eras, periods, and epochs. The time scale is marked by the appearance of new life forms. Life on Earth is never static – it changes and evolves …… .
Creatures become extinct and others appear. Some …… may be short-lived and others survive unchanged for millions of years. Using fossil evidence scientists build a picture of life in the past. Extensive …… covered the land during the Carboniferous period (363-290 million years ago). It was during this time that forests, containing …… and ferns, flourished. Some of these were preserved and now form coal deposits. The first …… and giant dragonflies lived in these swamps.

Metamorphic rocks

Sedimentary, metamorphic, or igneous rocks are …… into new metamorphic rocks. The rock doesn't …… but it is changed underground by …… and heat. During mountain …… , in particular, intense pressure over millions of years alters the …… and nature of rocks. Igneous rocks such as granite change into gneiss and sedimentary rocks like limestone into marble.

Metamorphic facts

*The oldest rock on Earth is a metamorphic rock. It is Amitsoc gneiss from Amitsoc Bay, Greenland.
*Rubies are found in metamorphic limestone in the Himalayas. They formed during mountain building.

7. Match the word with its explanation:

bog - a ridge of rock usually lying just below the surface of the sea but which may be visible at low tide;
coral - a coarse-grained, acidic intrusive rock formed by the slow cooling of magma deep within the earth's crust;
granite - a small primitive marine animal with a calcium carbonate skeleton found in tropical and equatorial waters;
mineral - any naturally occurring solid inorganic substance of definite

chemical composition and crystalline structure, such as feldspar or mica;

reef - an area of undrained land which supports wet, spongy vegetation consisting mainly of mosses, sedges, rushes and some grasses.

Section 2

1. Think of the following questions and try to answer them:

1. What is an earthquake?
2. What are most earthquakes caused by?
3. What are the strongest earthquakes so far recorded?
4. What is a tsunami?
5. What are most tsunami caused by?
6. What are the most severe tsunami so far recorded?
7. Why do we need to research the mantle ant the core of the earth?

2. Read and translate the following text using a dictionary:

Journey to the centre of the Earth

Japanese scientists are to explore the centre of the Earth. Using a giant drill ship, the researchers aim to be the first to punch a hole through the rocky crust that covers our planet and to reach the mantle below.

The team wants to retrieve samples from the mantle, 10 m down, to learn more about what triggers undersea earthquakes, such as the one off Sumatra that caused 2005 December's tsunami. They hope to study the deep rocks and mud for records of climate change and to see if the deepest regions of earth could harbour life. One of the main purposes of doing this is finding deep bacteria within the ocean crust and upper mantle.

Rocks in the upper mantle produce compounds essential for life when they react with seawater. This is a system, researchers believe, that created early life. There may be a chance that they can catch the origin of life still taking place today.

The 57,500-tonne drill ship Chikyu (Japanese for Earth) is being prepared in the southern port of Nagasaki. Two-thirds the length of the Titanic, it is fitted with technology borrowed from the oil industry that will allow it to bore through 7,000 metres of crust below the seabed while floating in 2,500 metres of water – requiring a drill pipe 25 times the height of the Empire State building.

The deepest hole drilled through the seabed so far reached 2,111 metres. After final sea trials, the scientists will set sail for the deep Pacific where the Earth's crust is thinnest. Drilling is expected to begin next year. It could take more than a year to drive through the crust and reach the mantle, so the ship is fitted with six rotating thrusters controlled by GPS satellites to keep it directly over the hole. The drill is surrounded by a sleeve that contains a shock-absorbing chemical mud, and a blow-out valve will protect it should the team strike oil or superheated rock in the crust. The project is part of an international effort called the Integrated Ocean Drilling programme, which also involves the US and Europe.

Previously undiscovered bacteria that can survive the expected 100^0C temperatures of the upper mantle could be useful on the surface. Heatproof enzymes isolated from bugs brought back by earlier Japanese drill mission are now used in washing powders. Cores of rock and sediment from the so-called earthquake nest where the mantle meets the crust could also help geologists understand seismic events, and perhaps to give more warning. We can estimate how frequently marine sliding or earthquakes occur from learning the history of the earth but we still don't know when they will occur in the future.

Sensors places in the boreholes could detect changes in strain, tilt and pressure in the deep below the surface. "That will be a great advantage in giving us a few days or hours warning before something happens. Warning systems in Japan only give us 10 minutes before a large earthquake strikes. We need real-time data from the exact point", says the team leader, Dr. Kuramoto.

3. Put questions to the following statements:

1. Japanese scientists are to explore the centre of the Earth.
2. The team of researches wants to retrieve samples from the mantle of the earth.
3. Rocks in the upper mantle produce compounds essential for life when they react with seawater.
4. The project is part of an international effort called the Integrated Ocean Drilling programme, which also involves the US and Europe.
5. Sensors places in the boreholes could detect changes in strain, tilt and pressure in the deep below the surface.
6. The deepest hole drilled through the seabed so far reached 2,111 metres.
7. We can estimate how frequently marine sliding or earthquakes occur from learning the history of the earth.

4. Match a word in A with a word in B and translate the word-combinations obtained:

A	**B**
to explore	powders
deep	the centre
heatproof	rocks
marine	changes
warning	superheated
produce	systems
sliding	compounds
detect	rock
rotating	thrusters
washing	enzymes

5. Insert the missing letters:

p…nc…, sl…di…g, rea…-t…me, ad…ant…ge, …t…ain, pre……ure, til…, …ar…ing, sa…p…es, fre……ently, d…te…t, t…ruste…s, tri……ers, ha…bour, se…smic, e…act, sed…me…t, bac…er…a, …reviou…ly, b…rehol…s, sho…k-ab…orbing.

6. Match the word with its explanation:

seismic events	- a sudden shaking of the earth's surface that often causes a lot of damage;
sample	- very small living things, some of which cause illness or disease;
sliding	- a tidal wave;
earthquake	- events or activity relating to or caused by earthquakes;
sediment	- the land at the bottom of the sea;
mantle	- a deep hole made using special equipment, especially in order to get water or oil out of the ground;
borehole	- the part of the Earth around the central core;
tsunami	- a sudden fall of earth down a slope;
bacteria	- a small part or amount of something that is examined in order to find out something about the whole;
seabed	- solid substances that settle at the bottom of a liquid.

7. Fill in the correct words from the list below. You may use one and the same word more than once:

Earthquakes, severe, destructiveness, shock, intensity, displacement, crustal, faults, scar, fracture, crust, rock.

…… occur without warning. Usually the first …… is the most …… , with disturbances of lessening …… following at intervals for days or months afterward. A major earthquake may be felt over many thousands of square kilometres, but its …… is limited to a much smaller area.

The great majority of …… are caused by the sudden …… of …… blocks along …… . A fault is the …… left by a …… which occurred when the stresses developed within the …… became too great for the …… to support.

8. Unscramble the following words and translate them:

Jaeanpes, siensctits, etarhuaqke, imsions, semtiate, rietreev, itrsan, nudisoverc, sruounrd, seesntial, rqfeuently, falontig, levav, hresarecers, ipep, itnernantioal, proramgem, ocrcu, tsrkie, mclieat, rmaien, ttli, pspuroe, eselve, gsgeoloist.

Unit 9

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

energy	- енергія
accomplish	- завершувати
physical quantity	- фізична кількість
foot-pound	- футо-фунт
joule	- джоуль
agency	- сприяння
power	- сила, потужність
work	- робота
motion	- рух
capacity	- потужність, міць
kinetic energy	- кінетична енергія
position	- стан, положення
potential energy	- потенційна енергія

2. Read and translate the following text using a dictionary:

Energy

Usually we associate the word *energy* with activity or motion: a falling stone possesses energy, an energetic person is constantly doing things. Sometimes, though, we speak of certain foods as being rich of energy or of the earth as receiving radiant energy from the sun. What is it that a piece of pie and a falling stone have in common? The answer is, they both possess the ability to accomplish change, whether directly as in the case of the stone, or indirectly as in the case of the pie. In order to establish how energy and change are related, we begin by defining the physical quantity called *work*.

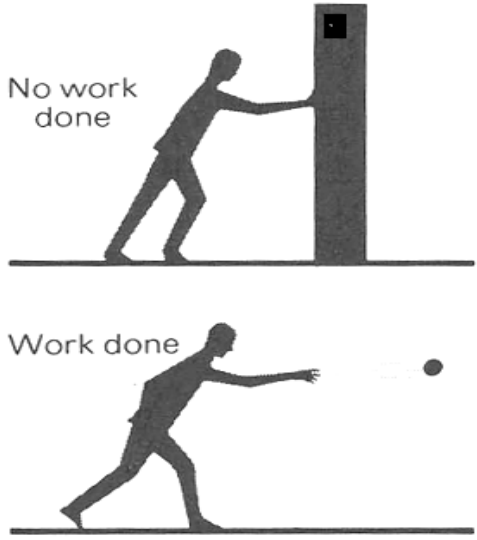


Fig. 6. The work done by a force on a body is the product of the force and the distance through which the body moves while the force acts upon it. For a force to do work on a body, the body must undergo a displacement while the force acts on it. No work is done by pushing against a rigid wall

In the British system of units, the unit of work is the *foot-pound*. One foot-pound is the amount of work done by a force of one pound that acts

through a distance of one foot. In the metric system, the unit of work is the *joule* (J), where 1 J is equal to 0,738 ft-lb.

The rate at which work is being done by some agency is called *power*. The more powerful an engine is, the more work it can perform in a certain length of time. The metric unit of power is the *watt* (W), where one watt is equal to one joule per second. The *horsepower* (hp) is the customary unit of power in engineering: 1 hp equals 746 W or 550 ft-lb/s.

Energy may be thought of as that property of something which enables it to do work. When we say that something possesses energy, we suggest that it is capable in some way of exerting a force on something else and performing work on it. When work is done on something, on the other hand, energy has been added to it. Energy is measured in the same units as those of work, the foot-pound and the joule.

Energy occurs in several forms. A familiar example is the energy a moving body possesses by virtue of its motion. Every moving object has the capacity to do work. By striking another object that is free to move, the moving object can exert a force and cause the second object to shift its position. It is not necessary that the moving object actually do work; it may keep on moving, or friction may slowly bring it to a stop. But while it is moving, it has the *capacity* for doing work. It is this specific property that defines energy, since energy means the ability to do work, and so all moving things have energy by virtue of their motion. This type of energy is called *kinetic energy*.

The statement that energy is the capacity something has to do work is not restricted to kinetic energy but is perfectly general. Many objects possess energy because of their *position*. Energy of this sort, depending merely on the position of an object, is called *potential energy*.

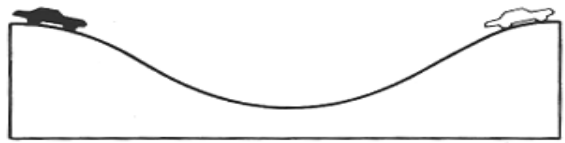


Fig. 7. Conservation of energy. In the absence of friction, a car can coast from the top of one hill into a valley and then up to the top of another hill of the same height as the first. In doing this the initial potential energy of the car is converted into kinetic energy as it goes downhill, and this kinetic energy then turns into potential energy as it climbs the next hill.

Examples of potential energy are everywhere. A book on a table has potential energy, since it can fall to the floor; a skier at the top of a slope, water at the brink of a cataract, a car at the top of a hill, anything capable of moving toward the earth under the influence of gravity has energy because of its position. Nor is the earth's gravity necessary: a planet has potential energy with respect to the sun, since it can do work in falling toward the sun; a nail placed near a magnet has potential energy, because it can do work in moving to the magnet.

Nearly all familiar mechanical processes actually consist of interchanges of energy among its kinetic and potential forms and work. Thus when the car drives to the top of a hill, its engine must do work in order to raise the car. At the top, the car has an amount of potential energy equal to the work done in getting it up there (neglecting friction). If the engine is turned off, the car can still coast down the hill, and its kinetic energy at the bottom of the hill will be the same as its potential energy at the top.

3. Now reread the text very carefully, looking up any new items in the glossary. Then answer the following questions:

1. How is energy defined?
2. How many kinds of energy are mentioned in the text?
3. What rule is given for defining *work*?
4. What two systems of units are mentioned in the text?
5. What is the first kind of energy mentioned in the text?
6. Why are forces needed?
7. What usually accompanies the application of force?
8. What is power?
9. What does *hp* stand for?
10. What does the word *capacity* mean?
11. How is *kinetic energy* defined?
12. Can you explain the word *distinction*?

4. Unscramble the following words and translate them:

atsocisae, porpetyr, mehcaicnal, genrye, optetinal, agryvit, fnrctiio, neegin, acpaciyt.

5. Put questions to the following statements:

1. Work equals force times displacement.

2. Power is the rate of doing work.
3. Energy is the capacity to do work, that is, to produce change.
4. Kinetic energy is energy of motion.
5. Many objects possess energy because of their position.
6. Nearly all familiar mechanical processes actually consist of interchanges of energy.
7. In the British system of units, the unit of work is the foot-pound.
8. Examples of potential energy are everywhere.
9. Every moving object has the capacity to do work.
10. The horsepower (hp) is the customary unit of power in engineering.

6. Using words from the text, can you complete the following statements?

1. When you get into a bath, you …… some of the water.
2. The Greeks and ancient Egyptians had a different …… of the shape of the earth.
3. A large engine can …… more work than a small one.
4. When you kick a football you …… force.
5. A joule is a unit to measure the …… of work done.
6. Potential energy is energy of …… .
7. …… equals force times displacement.
8. Power is the …… of doing work.
9. …… is the capacity to do work; that is, to produce change.
10. Kinetic energy is energy of …… .

7. Try to find which words in the text have the same meaning as:

- movement
- share
- always
- hitting
- has/owns
- continue
- can
- kind/sort of

8. Say which words in the text have the opposite meaning to:

- held on to
- put down
- absent
- lost
- complicated

9. Match a word in A with a word in B and translate the word-combinations obtained:

A	**B**
possess	quantity
accomplish	of gravity

mechanical	object
potential	property
influence	change
moving	processes
perfectly	forms
physical	energy
specific	general

10. Insert the missing letters:

ac…om…lish, in…erch…nge, …erel…, f…ict…on, ca…arac…, fa…ilia…, capac…t…, …nd…rectly, v…rtu…, g…av…ty, o…je…t, en…in…, pr…pe…ty, co…st, …ner…y, ev…ryw…ere, actua……y, m…vin…, d…fin…, a……ociate, str…k…ng, e…ert, na…l, in…luen…e, k…net…c, …oule, p…ysic…l, q…ant…ty.

11. Match the word with its explanation:

position	- all the time;
kinetic	- the place where someone or something is, especially in relation to other objects and places;
constantly	- relating to movement;
friction	- having the qualities or ability needed to do something;
capable	- the ability that something has to work or move;
exert	- to succeed in doing something, especially after trying very hard;
gravity	- a piece of iron or steel that can stick to metal or make other metal objects move towards itself;
magnet	- the force that causes something to fall to the ground or to be attracted to another planet;
accomplish	- to use power in order to make something happen;
energy	- the natural force that prevents one surface from sliding easily over another one.

Section 2

1. Before reading the text think of the following questions and try to answer them:

1. Do you have a pet animal?
2. In what way to your mind should people behave with their pets?

3. What laws do you know to protect animals and the environment?

2. Read and translate the following text using a dictionary:

Rome frees goldfish from "cruel" bowls

The city of Rome has passed a new law to prevent cruelty to animals. All goldfish bowls are now banned and dog owners must walk their dogs regularly in the Italian capital. The classic round goldfish bowls are no longer allowed and fish or other animals can't be used as fairground prizes. All this comes after a national law was passed to give jail sentences to people who abandon cats or dogs.

"The civilisation of a city can be measured by this. It's good to do whatever we can for our animals who in exchange for a little love fill our existence with their attention" said Monica Cirinna, the councillor behind the new law.

The newspaper reported that round bowls don't give enough oxygen for fish and may make them go blind.

Animal rights group People for the Ethical Treatment of Animals (Peta) said Rome had tried to protect fish more than anywhere else in the world. It gave Monica Cirinna its International Humanitarian Award.

"Rome stands out for recognising that fish are interesting individuals who deserve our respect and compassion every bit as much as dogs and cats and other animals". Last year the Italian parliament passed a law that gives people who abandon pets big fines and jail sentences. Since then local governments have added their own animal welfare rules.

The northern city of Turin passed a law in April to give pet owners fines of up to $598 if they do not walk their digs three times a day. The new law in Rome also says that owners mustn't leave their dogs in hot cars or cut their dogs' tails to make them look more attractive. The law also gives legal recognition to the "cat ladies" who feed stray cats. The cats live all over the city from ancient ruins to modern office car parks.

3. Put questions to the following statements:

1. The city of Rome has passed a new law to prevent cruelty to animals.
2. The civilisation of a city can be measured by what we can for our animals who in exchange for a little love fill our existence with their attention.
3. The law gives legal recognition to the "cat ladies" who feed stray cats.
4. The cats live all over the city from ancient ruins to modern office car parks.

5. Local governments have added their own animal welfare rules.
6. A national law was passed to give jail sentences to people who abandon cats or dogs.
7. Fish are interesting individuals who deserve our respect and compassion.

4. Match the word with its explanation:

pass	- to officially accept a law or proposal, especially by voting;
ban	- to prohibit something;
deserve	- to have earned something by good or bad actions or behaviour;
allow	- to permit or to be sure that something is acceptable according to the rules or law;
protect	- to keep someone or something safe from harm or damage;
jail sentence	- punishment of time in jail;
abandon	- to leave someone, especially someone you are responsible for;
existence	- the state of existing;
compassion	- a strong feeling of sympathy for someone who is suffering, and a desire to help them;
welfare rules	- a system of rules according to which the government provides money, free medical care, etc.

5. Match a word in A with a word in B and translate the word-combinations obtained:

A	B
dog	rules
interesting	governments
stray	pets
Italian	cats
legal	parliament
big	Individuals
local	compassion
abandon	owners
deserve	fines
welfare	recognition

6. Insert the missing letters:

Cr…el…y, r…gularl…, g…ldfi…h, fa…rgrou…d, a…ando…, c…vili…ation, l…w, e…istenc…, co…nc…lor, o…yg…n, bli…d, tr……tment, …rote…t, h…manitari…n, reco…nizi…g, …ompas…ion, parl…ame…t, gover…men…s, o…ne…s, at…rac…ive, …nci…nt, ru…ns, …ecogn…tion, w…lfar….

7. Complete the following paragraph using appropriate forms of the verbs in brackets:

Surfer Survives Shark Attack

A 40 year-old Australian man …… (celebrate) Father's Day with a family trip to the seaside when disaster …… (happen). Jake Heron, a fisherman from Port Lincoln, South Australia, …… (surf) 10 metres from the beach when a great white shark …… (attack) him.

"I just …… (look) round suddenly and …… (see) a big black body in the water," …… (say) Heron. "Then I …… (feel) the bite on my leg. And with the next bite the shark …… (grab) my surfboard."

Heron's two children …… (play) on the beach at the time and they …… (look) in horror at the attack on their father.

Heron …… (start) to punch and kick the shark. He …… (grab) back his board and …… (begin) to swim to the beach with the help of a large wave.

Heron's surfing friend, Craig Matena, immediately …… (take) him to the local hospital where he …… (have) 20 stitches in his arm and 40 in his leg.

8. Complete the following paragraph using appropriate words from the list. You may use one and the same word more than once:

Environment

Environment, ecology, physical factors, pressure, food resources, species

…… is the surroundings in which animals and plants live. The study of organisms in relation to their …… is called …… . Organisms are affected by many different …… …… in their …… , such as temperature, water, gases, light, …… and also biotic factors such as …… , competition with other …… , predators and disease.

9. Unscramble the following words and translate them:

canietn, gllea, creogniiont, wonesr, spas, idinviaduls, ehlicta, erpotr, fagirrunod, jali, celtyru, saniaml, bolsw, rpiezs, partiamlen, ersepct, teatntion, abndnoa, croiunclo, ept, gomvernesnt, iattrctvea, sencesten, ryergulal, emsuare, fsine, mhuanitianar, tmereatnt.

Unit 10

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

ultimately	- зрештою
source	- джерело
fuels	- паливо
civilisation	- цивілізація
application	- застосування
nuclear reactors	- ядерні реактори
contemplate	- розмірковувати
evaporate	- випаровуватися
explosives	- вибухові речовини
manufacturing	- виробництво, вироблення
transmit	- передавати

2. Read and translate the following text using a dictionary:

Energy and Civilisation

Almost all the energy available to us on the earth today has come ultimately from a single source – the sun. Light and heat reach us directly from the sun; food and wood owe their chemical energy to sunlight falling on plants; water power exists because the sun's heat evaporates water constantly from the oceans. The fossil fuels coal, oil, and natural gas were formed from plants and animals that lived and stored energy derived from sunlight millions of years ago.

Modern civilisation owes its spectacular development in large measure to the discovery of vast sources of energy and to the development of new methods of storing and transforming it. Within less than 200 years man has learnt to convert the chemical energy of coal, oil, and natural gas into mechanical energy, to store chemical energy in explosives, to get electrical

energy from moving water, and to use electrical energy for heating, lighting, mechanical work, and communication. In the development of nuclear reactors a new energy source has been tapped – the energy stored in the interior of atoms. Other possible sources, still being explored, are the energy of tides and radiant energy direct from the sun.

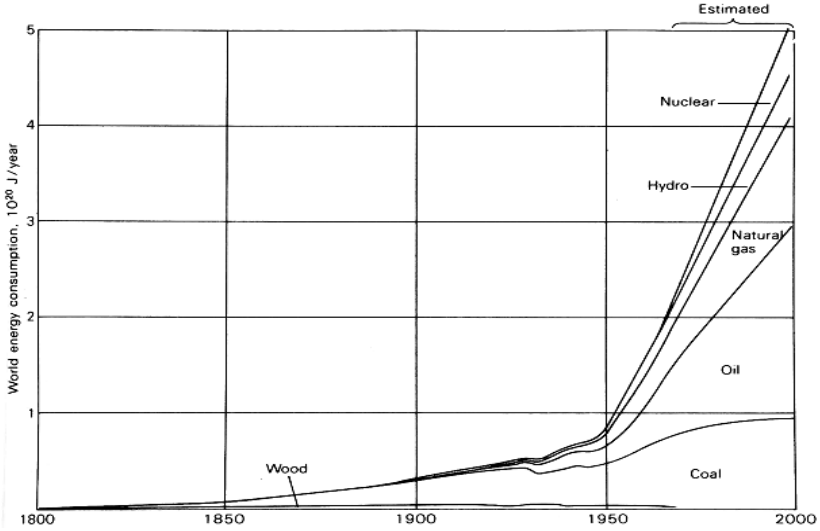


Fig. 8. World energy sources and consumption

It is evident how rapidly man's use of energy has grown in the last few decades. The chief reason is the increase in average energy use per person. A century ago, the rise of industrial revolution led to the use of about 300 million *J* per person per day in the more advanced countries. Today the number of people who share the benefits of industrialisation is much greater and they each tend to use more energy as well: in the United States, the energy used per person per day is three times the above figure. In fact, the United States, with 6 percent of the world's population, uses 35 percent of its energy.

Not all of the energy consumed today goes into manufacturing, transportation, lighting, space heating, and other traditional applications – more and more is being used to produce the artificial fertilisers needed by modern agriculture. This brings us to the aptly named population explosion: the world's population will double in the next 30 years or so. To double food production is certainly possible, but only by the heavy use of fertilisers which

will require disproportionately large amounts of energy. It is impossible to add substantially to the supply of food without first adding more substantially still to the energy supply. What will happen if the population continues to increase past the doubling that is in sight is not reassuring to contemplate.

Clearly it is not possible to project present trends of energy demand very far ahead. On the supply side, the fossil fuels that today provide about 98 percent of man's energy will sooner or later be exhausted. Natural gas will be the first fossil fuel to run out, followed soon afterward by oil. Coal reserves are much greater, and ought to last at least another century. Nuclear fuels, too, are sufficient for another century or more. And if practical methods for utilising thermonuclear energy are devised, the energy reserves available to man will be virtually unlimited. Though fossil fuels must inevitably diminish in importance, there seems to be no basic reason why other sources of energy cannot take their place.

However, despite the probable presence of adequate fuel of one kind or another, the current rate of increase of energy consumption cannot continue for very much longer. What stands in the way is the intrinsic inefficiency of all methods of converting heat into mechanical energy; electrical energy is included here, since it is produced by using mechanical energy to power generators. The inefficiency is not due to poor machinery but to the laws of thermodynamics – some heat must be wasted in every heat engine. Even nuclear energy is inefficient, because it is turned into heat in a reactor and this heat is then used to operate a steam turbine which is connected to an electric generator. The conversion of heat into mechanical energy cannot be more than partly efficient, and some heat must be given off to the outside world.

Even today the disposal of waste heat from power plants is a problem in the heavily industrialised parts of the world. Generating plants in the United States already use about 10 percent of the flow of all the rivers and streams of the country for cooling purposes. There are likely to be serious biological consequences if the scale of heating of inland waters rises much further, and if waste heat is instead discharged into the atmosphere with the help of cooling towers, the weather and climate of the region involved may be changed in a perhaps harmful way. Although the oceans can safely absorb much waste heat, locating power plants exclusively on their shores poses the question of transmitting the energy they produce for thousands of miles inland.

Nevertheless it seems clear that a considerable further increase in energy consumption is possible without undue environmental damage

provided care is used. It also seems clear that no increase is possible which can keep up for much longer with both the current rise in world-wide living standards and the current rise in world population. The laws of thermodynamics are not subject to repeal, and a future energy crisis will represent a social failure, not a technological one.

3. Put questions to the following statements:

1. Almost all the energy available to us on the earth today has come from the sun.
2. Water power exists because the sun's heat evaporates water from the oceans.
3. Modern civilisation owes its development to the discovery of vast sources of energy and to the development of new methods of storing and transforming it.
4. Within less than 200 years man has learnt to convert the chemical energy of coal, oil, and natural gas into mechanical energy.
5. Even today the disposal of waste heat from power plants is a problem in the heavily industrialised parts of the world.
6. Natural gas will be the first fossil fuel to run out, followed soon afterward by oil.

4. Find the terms in the text which describe the following:

- coal, oil and natural gas
- the number of people in the world
- something made by man; not natural
- farming

5. These words can be explained in simpler, more everyday language. Can you do that?

- derive
- consume
- substantially
- contemplate
- sufficient
- utilise

6. Now look at these statements. Using the information from the text, say if they are correct or incorrect:

- We have water power because sunlight gives water chemical energy……
- Animals and plants are the origin of fossil fuels……..
- Man makes considerable use of radiant energy today…….

● The United States uses more than half the world's energy……..
● The amount of energy used in agriculture is increasing……..
● We cannot double food production in the next 30 years……..
● The writer is not worried about the population increase……..
● The three fossil fuels will last another 100 years……..
● The writer does not believe the fossil fuels can be replaced…….
● The writer thinks thermonuclear energy will make no difference to our supply of energy…….....

7. Summarise in your own words what the writer sees as problematic.

8. Match the word with its explanation:

waste	- the process of gradually becoming more advanced; of increasing business and industrial activity;
cooling towers	- the science that deals with the relationship between heat and other forms of energy;
reactor	- a machine that produces electricity;
stream	- the smallest part of an element that can exist alone or can combine with other substances to form a molecule;
consumption	- warmth or the quality of being hot; a high temperature;
atom	- a natural flow of water that moves across the land and is narrower than a river;
generator	- a large machine that produces nuclear energy, especially as a means of producing electricity;
thermodynamics	- a large round tall building, used in industry for making water cool;
development	- waste materials, substances etc are unwanted because the good part of them has been removed;
heat	- the amount of energy, oil, electricity etc that is used.

9. Complete the following paragraph using appropriate words from the list. You may use one and the same word more than once:

efficiency, energy, heat, matter, electricity, radiation, processes

…… exists in a number of equivalent forms. The commonest of these is …… – the motion of the molecules of …… . Ultimately all other forms of …… tend to convert into thermal motion. Another form of …… is the motion of electrons – …… . Moving electrons give rise to electromagnetic fields, and these too contain energy. A pure form of electromagnetic …… is electromagnetic …… (radiant energy) such as

light. Although all forms of …… are equivalent, not all interconversion …… go with 100 % …… .

Section 2

1. Think of the following questions:

1. What is the Gulf Stream?
2. Is the Gulf Stream a stream or a current?
3. In what way does the Gulf Stream influence the world's climate?

2. Read and translate the following text using a dictionary:

Gulf Stream losing its zing

The powerful ocean current that bathes the British Isles in warm waters from the tropics has weakened dramatically in recent years, a consequence of global warming that could trigger more severe winters and cooler summers across the region, scientists warn.

Researchers on a scientific expedition in the Atlantic Ocean measured the strength of the current between Africa and the east coast of America and found that the circulation has slowed by 30 % since a previous expedition 12 years ago.

The current, which drives the Gulf Stream, delivers the equivalent of 1m power stations' – worth of energy to northern Europe, propping up temperatures by 10^0C in some regions. The researchers found that the circulation has weakened by 6m tones of water a second. Previous expeditions to check the current flow in 1957, 1981 and 1992 found only minor changes in its strength, although a slowing was picked up in a further expedition in 1998.

If the current remains as weak as it is, temperatures in Britain are likely to drop by an average of 1^0C in the next decade. Models show that if it shuts down completely, 20 years later, the temperature is 4^0C to 6^0C degrees cooler over the UK and north-western Europe.

The current is essentially a huge oceanic conveyor belt that transports heat from equatorial regions towards the Arctic circle. Warm surface water coming up from the tropics gives off heat as it moves north until eventually it cools so much in northern waters that it sinks and circulates back to the south. There it warms again, rises and heads back north. The constant sinking in the north and rising in the south drives the conveyor.

Global warming weakens the circulation because increased meltwater from Greenland and the Arctic ice sheets along with greater river run-off from

Russia pour into the northern Atlantic and make it less saline, which in turn makes it harder for the cooler water to sink, in effect slowing down the engine that drives the current.

The final impact of any cooling effect will depend on whether it outweighs the global warming that, paradoxically, is driving it. According to climate modellers, the drop in temperature caused by a slowing of the Atlantic current will, in the long term, be swamped by a more general warming of the atmosphere. Any cooling driven by a weakening of the Atlantic current would probably only slow warming rather than cancel it out all together. Even if a slowdown in the current put the brakes on warming over Britain and parts of Europe, the impact would be felt more extremely elsewhere.

3. Put questions to the following statements:

1. Researchers on a scientific expedition in the Atlantic Ocean measured the strength of the current between Africa and the east coast of America.
2. The researchers found that the circulation has weakened by 6m tones of water a second.
3. The current is essentially a huge oceanic conveyor belt that transports heat from equatorial regions towards the Arctic circle.
4. Previous expeditions to check the current flow in 1957, 1981 and 1992 found only minor changes in its strength.

4. Complete the following paragraph using appropriate words from the list. You may use one and the same word more than once:

currents, density, friction, motion, flow, continuation

Ocean …… are large-scale permanent or semipermanent movements of water at or beneath the surface of the oceans. …… may be divided into those caused by winds and those caused by differences in …… of seawater. In the former case, …… between the prevailing wind and the water surface causes horizontal …… , and this …… is both modified by and in part transferred to deeper layers by further friction. …… variations may result from temperature differences, differing salinities, etc. The direction of …… of all …… is affected by the Coriolis Effect. Best known, perhaps, are the Gulf Stream and Humbolt Current. Gulf Stream is a warm ocean current flowing North, then North-East, off the eastern coast of the US. Its weaker,

more diffuse …… is the east flowing North Atlantic Drift, which is responsible for warming the climates of Western Europe.

5. Match a word in A with a word in B and translate the word-combinations obtained:

A	B
ocean	regions
global	impact
northern	winters
final	warming
severe	Europe
previous	summers
climate	sheets
ice	modellers
equatorial	current
cooler	expedition

6. Unscramble the following words and translate them:

crurnet, cqonsecuene, trgeigr, nexpeitdio, cilrcnuaito, pirevsou, etqivualen, pgropinp pu, eewakn, folw, rmnio, odrp, aerevag, olceor, cynrvoeo, ueqatorali, levtualyen, ksinign.

7. Arrange the following words to make up sentences:

1. Researchers, the, the, between, the, east, measured, of, of, and, coast, current, strength, Africa, America.
2. The, the, from, regions, Arctic, current, equatorial, towards, transports, heat, circle.
3. Warm, up, from, off, as, north, the, and, water, moves, surface, gives, comes, tropics, heat, it.
4. The, Europe, power stations' – worth, delivers, to, 1m, of, of, current, the, equivalent, energy, northern.
5. Surface, back, to, heads, and, the, it, again, circulates, water, south, north, where, warms, rises. back.
6. Global, Greenland, weakens, because, the, warming, meltwater, Atlantic, circulation, it, ice, and, Arctic, the, the, and, pour, less, sheets, increased, from, into, northern, make, saline.

8. Match the word with its explanation:

circulation	- a continuous movement of water in a river, lake, or sea;
consequence	- an area of thick ice that permanently covers the North and South Poles;
expedition	- the effect or influence that an event, situation, etc has on someone or something;
prop up	- containing or consisting of salt;
global warming	- the quality of being full of energy or taste;
impact	- a long and carefully organised journey, especially to a dangerous or unfamiliar place;
current	- the movement of liquid, air, etc in a system;
zing	- a general increase in world temperatures caused by increased amounts of carbon dioxide around the Earth;
ice sheets	- something that happens as a result of a particular action or set of conditions;
saline	- to prevent something from falling by putting something against it or under it.

Unit 11

Section 1

1. Learn the following words and their translations. Check up yourself by back translation:

particle	- частка, частина
substance	- речовина
matter	- матерія
suspicion	- підозра
existence	- існування
amply	- цілком достатньо
decompose	- розкладатися
solids	- тверді тіла
compound	- сполука
precisely	- точно, достотно
convention	- згода, угода
subscript	- приписування, підпис
chemical equation	- хімічне рівняння
arrow	- стрілка

2. Read and translate the following text using a dictionary:

Matter

Suppose there were no limit to the power of our microscopes, so that we could examine a drop of water under stronger and stronger lenses indefinitely. What sort of microscopic world would we discover when the drop was enlarged, say, a million times? Would we still see structureless, transparent, liquid water? Or would we perhaps see distinct particles, the building blocks, as it were, of the water that to our unaided senses is a completely uniform substance? Long ago people began to suspect that matter, despite its appearance of being continuous, actually possesses a definite structure on a microscopic level. This suspicion did not take on a more concrete form until early in the last century. Since then the existence of atoms and molecules, the ultimate particles of matter in its common forms, has been amply demonstrated, and their own ultimate particles have been identified and studied as well.

Elements and Compounds

Elements are substances that cannot be decomposed or transformed into one another by ordinary chemical or physical means. The earth contains only a limited number of elements, and all other materials consist of two or more of them combined in various ways. Of the 105 known elements (not all found on the earth), 11 are gases, 2 are liquids, and the rest are solids at room temperature and atmospheric pressure. Hydrogen, oxygen, chlorine, and neon are familiar gaseous elements; bromine and mercury are the two liquids; iron, zink, tin, aluminium, copper, lead, silver, gold, carbon, and sulphur are among the solid elements.

Some materials consist of two or more elements united in a *compound*; water is a compound of the elements hydrogen and oxygen. The elements in a compound are combined in definite, invariable proportions to form a new substance with characteristic properties of its own. In water, every gram of oxygen is combined with precisely 0.126 g of hydrogen, and it is a liquid at room temperature whereas hydrogen and oxygen are gases. Other materials consist of mixtures of elements or of compounds in which the separate substances do not lose their identities as they do in the case of a compound, and can be present in variable proportions.

The ultimate particles of an element are called *atoms*. A *molecule* is a group of atoms that stick together tightly enough to act as a unit. Many elemental gases consist of molecules instead of individual atoms. Thus gaseous oxygen contains molecules each of which is a pair of oxygen atoms

bound together by forces whose nature we shall explore shortly. Other elemental gases, for instance helium and neon, consist of individual atoms. Most elemental solids and liquids are assemblies of individual atoms.

Many compounds consist of molecules. The molecules of a compound have specific compositions and structures. Each water molecule contains two hydrogen atoms and one oxygen atom with the hydrogen atoms 105˚ apart, for example, while each ammonia molecule contains three hydrogen atoms 107.5˚ apart.

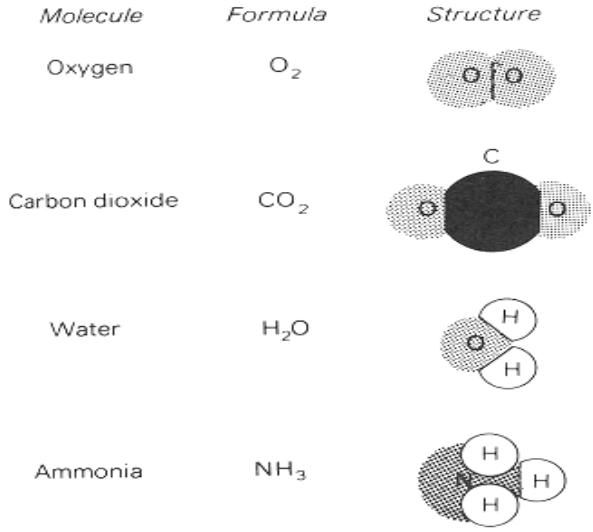


Fig. 9. Structures of several common molecules

Chemical Symbols

By convention an atom of an element is represented by an abbreviation of the element's name. For many elements the first letter is used; an atom of oxygen is O, an atom of hydrogen H, an atom of carbon C. When the names of two elements begin with the same letter, two letters are used in the abbreviation for one or both: Cl stands for an atom of chlorine, He for helium, Zn for zinc. For some elements abbreviations of Latin names are used: a copper atom is Cu (cuprum), an iron atom Fe (ferrum), a mercury atom Hg (hydrargyrum). These abbreviations are called the *symbols* of the elements.

Two or more atoms joined to form a molecule are represented by writing their symbols side by side: a carbon monoxide molecule is CO, a zinc sulphide molecule ZnS, a mercuric oxide molecule HgO. When a molecule contains two or more atoms of the same kind, a subscript indicates the number present: The familiar expression H_2O means that a molecule of water contains two H atoms and one O atom; a molecule of oxygen, containing two O atoms, is written O_2; a molecule of carbon tetrachloride (CCl_4) contains one C atom and four Cl atoms; a molecule of nitrogen pentoxide (N_2O_5) contains two N (nitrogen) atoms and five O atoms. Each subscript applies only to the symbol immediately before it. These expressions for molecules are called *formulas*.

As a shorthand method of expressing the results of a chemical change, the formulas of the substances involved can be combined into a *chemical equation*. An equation includes the formulas of all the substances entering the reaction on the left-hand side with the formulas of all the products on the right-hand side. The formulas may be written in any order and are connected by + signs; between the two sides of the equation is placed an arrow. Thus, when carbon burns, the two substances that react are carbon (C) and oxygen (O_2), and the only product is carbon dioxide (CO_2):

$C + O_2 \rightarrow CO_2$

This equation means, in words: “carbon reacts with oxygen to form carbon dioxide”.

3. Answer the following questions:

1. What world is the writer talking about in the first paragraph?
2. What has been proved to exist over the last century?
3. How many known elements are there?
4. What kinds of elements are there?
5. What kinds of element are copper, mercury, and chlorine?
6. What is a compound?
7. Do the elements of a compound change?
8. What is the difference between an atom and a molecule?
9. What is a symbol of an element?
10. Give an example of a chemical equation.

4. Put questions to the following statements:

1. Long ago people began to suspect that matter actually possesses a definite structure on a microscopic level.
2. Many compounds consist of molecules.
3. Some materials consist of two or more elements united in

a compound.

4. Each water molecule contains two hydrogen atoms and one oxygen atom.
5. For some elements abbreviations of Latin names are used.

5. Look at paragraph 1 and say which words are used to mean:

- a piece of glass through which you look in cameras and other instruments
- to make bigger
- which can be seen through
- fully

6. Look at paragraphs 2 and 3 and say which words have the opposite meaning to:

- unusual
- separate
- changing
- inexactly

7. Look at paragraph 4 and say which words in the text you could replace with:

- closely
- so
- look into
- for example
- groupings

8. Look at paragraphs 6 – 8. Can you explain the following words:

- abbreviation
- subscript
- formula

9. Express the following in words:

- ()
- +
- →

10. Can you explain what the following are? Try not to look back at the text when you explain!

1. CO_2
2. Ammonia
3. O_2
4. H_2O

11. Unscramble the following words and translate them:

pmiscroscoe, clhiorne, cmoeleul, rfoamuls, cporpe, sustbaencs, yogxen, absrevbiaotin.

12. Match the word with its explanation:

reaction	- a statement of equality;
symbol	- a short form of a word or expression or the act of abbreviating;
formula	- the smallest unit into which any substance can be divided without losing its own chemical nature, usually consisting of two or more atoms;
abbreviation	- a letter, number, or sign that represents a sound, an amount, or chemical substance;
molecule	- a series of numbers or letters that represent a scientific rule;
equation	- a chemical change that happens when two or more substances are mixed together;
expression	- something that is produced through a natural or chemical process;
product	- a sign or group of signs that represent idea or quantity.

Section 2

1. Think of as many words as possible related to the theme "Recycling". How can each of us recycle objects?

2. Read the following text with the help of a dictionary and answer the questions:

Recycling

Julie Lewis is wearing an expensive-looking pair of boots. They are durable yet fashionable. To look at them you would never know that they were made entirely of recycled materials. Recycling has become extremely

popular in the US in recent years when the number of recycling schemes has increased by 500 percent. 65 percent of aluminium cans are recycled plus a quarter of paper and 20 percent of glass.

America even exports its waste. Taiwan buys used paper to make more paper and Japan uses American scrap metal and makes it into new cars, which it then sells back to the US.

Disposal of wastes poses a major problem. Landfill sites can cause pollution of water supplies.

A hugely successful scheme has been operating in Palm Beach County since 1988. Rubbish is sorted out into different categories. Paper, glass and plastic are sold to recycling firms. Other materials are used to make soil, which is then used for growing fruit and vegetables. Of course, recycling can be expensive.

Manufacturers in Germany are trying to solve the problem at the production stage, by looking at how their goods are packaged. Soap powders are concentrated and toothpaste tubes are sold without boxes.

1. Americans now recycle far more than they used to because
a) they are competing with Germany
b) they want to make a profit from recycling
c) they need more aluminium
d) they produce more rubbish than other countries
2. What does the Palm Beach County scheme involve?
a) making energy out of waste
b) selling fruit and vegetables for profit
c) producing plastic bottles
d) opening new recycling businesses
3. One of the arguments against recycling is that
a) it makes no sense using landfill sites
b) it damages the environment
c) no one is interested in running the scheme
d) it can be uneconomical to ship waste products cross-country
German manufacturers
a) are concentrating on improving soap powders
b) sell toothpaste in boxes instead of tubes
c) have cut down on packaging
d) are trying to make goods cheaper

3. Fill in the gaps with the appropriate synonymous words from the list below:

packaged, long-term, entirely, waste, wrapping, good investment,transport, site, sorted, desirable

We should try to dispose of our …… in a way that won't harm the environment (rubbish).

The hole in the ozone layer will have …… effects on the world's climate (long-lasting).

An empty piece of land outside town is the ……. for the new supermarket (location).

Reducing the size of classes in state schools is a(n) …… aim (attractive).

One of the most convenient means of …… is the aeroplane (travel).

Frozen vegetables are usually …… in sealed plastic bags (put in).

We should try to buy products with as little …… as possible (packaging).

Rubbish must be …… before it is sent for recycling (separated into similar types).

Their house is built …… of materials taken from demolished buildings (totally).

That unique table was a …… ; it has tripled in value since I bought it (profitable purchase).

4. Fill in the correct word derived from the words in brackets:

If we want to find a 1) …… (solve) to the world's waste disposal problems we should look at Palm Beach county in America. The county has an 2) …… (ambition) recycling scheme which has been 3) …… (extreme) successful. Waste is almost entirely recycled. Even the kitchen waste is used to provide 4) …….. (electric).

5. Choose the correct item:

1. Honey is a sweet …… that is produced by bees.

a. material b. substance c. matter d. fabric

Factories must stop pumping toxic …… into rivers.

a. garbage b. rubbish c. litter d. waste

Each sweet comes …… in silver paper.

a. enclosed b. folded c. packaged d. wrapped

Her mother works in a bank as a financial …… .

a. councillor b. counsellor c. adviser d. informer

She …… out some old clothes and gave them to a charity shop.

a. Sorted b. selected c. separated d. segregated

The new …… to help young people find jobs has been very successful.

a. Pattern b. scheme c. plot d. system

6. Fill in the gaps with the appropriate word(s) from the list below:

plastic, environmentally aware, recycling, environment, products, aluminium, decompose, disposing of, bottle banks

It is important these days to try to be as 1) …… as possible, which means 2) …… our waste instead of 3) …… it in the usual way. For example, instead of throwing 4) …… cans away, they can be crushed and taken for recycling, and bottles can be taken to 5) …… instead of being put in the rubbish bin. We should try to use as little 6) …… as possible because it takes a long time to 7) …… and to buy recycled paper to write on. Recycled 8) …… are often the same price as normal ones, but are a lot kinder to the 9) …… .

7. Put the verbs in brackets into the correct tense:

If I were a scientists, I 1) …… (find) a way to repair the hole in the ozone layer. Scientists believe that if world temperatures 2) …… (rise), sea levels 3) …… (rise) too and many towns 4) …… (be flooded). It is also possible that many fertile places 5) …… (become) desert. If this happened, there 6) …… (be) chaos throughout the world. If people had disposed of their rubbish more carefully, the environment 7) …… (not/be polluted) in the first place. Governments are also responsible for this situation, because if there had been tighter laws on pollution, factories 8) …… (not/release) such harmful chemicals into the atmosphere.

8. Match the word with its explanation:

aluminium	- the process of treating used objects or materials so that they can be used again;
durable	- food, paper, etc that is no longer needed and has been thrown away;
scrap metal	- things that are produced in order to be sold;
scheme	- a program, an official plan that is intended to help people in some way or to organize activities;
recycling	- a silver-white metal that is very light and is used to make cans, cooking pans, etc. It is a chemical element;

goods	- metal from old cars, machines that are no longer used for the purpose they were made for, but can be used again in another way;
rubbish	- staying in good condition for along time, even if used a lot.

Unit 12

Section 1

1. Learn the following words and their translation. Check up yourself by back translation:

minerals	- мінерали
rocks	- гірська порода
aggregates	- сукупність
limestone	- вапняк
apparent	- очевидний
discern	- розпізнавати
soluble	- розчинний
silicates	- силікати
abundant	- багатий, численний
mica	- слюда
feldspar	- польовий шпат
conspicuous	- помітний, значний
ore	- руда
iron	- залізо, залізна руда
galena	- галеніт
native	- самородний, чистий, щирий
redundancy	- дублювання
lattice	- просторова решітка кристала
nomenclature	- термінологія, найменування
constituents	- компоненти
cleavage	- кліваж, шарування
minute	- ретельний
cracks	- тріщина, розколина, шпара

2. Read and translate the following text using a dictionary:

Minerals

Rocks are aggregates of substances called *minerals*, which as a rule are crystalline solids with fairly definite compositions and structures. Some rocks, for instance limestone, consist of a single mineral only, but the majority consists of several minerals in varying proportions. The different minerals in a coarse-grained rock like granite are apparent to the eye; in fine-grained rock, the separate minerals can be discerned with the help of a microscope.

What Minerals Are

It is not difficult to understand why certain substances occur as minerals and why others do not. We expect to find the more chemically inactive elements, such as gold, platinum, and sulphur, in the free state, whereas chemically active elements, such as sodium, calcium, and chlorine, are always found in combination as compounds. Compounds readily soluble in water, such as sodium chloride, sodium carbonate, and potassium nitrate, form deposits in desert regions but are rare elsewhere. Substances that tend to react with oxygen occur only well below the surface away from the oxygen of the atmosphere. Unstable compounds like phosphorus pentoxide are necessarily absent from the earth's crust.

Silicates are by far the most abundant minerals; mica, feldspar, and topaz are familiar examples. Carbonates are another important class, its most conspicuous representative being the carbonate of calcium called calcite. Oxides and hydrated oxides include such common materials as hematite (ferric oxide), the chief ore of iron, and bauxite (hydrated aluminium oxide), the chief ore of aluminium. Various metals are obtained from deposits of sulphide minerals, such as galena (lead sulphide) and sphalerite (zinc sulphide). Elements that occur free, or *native*, were mentioned above. Less frequent as minerals are sulphates, phosphates, and chlorides.

Unfortunately the study of minerals requires the learning of a special list of names, some of them apparently duplicates of other names. As an example, the mineral whose formula is $CaCO_3$ is given the name *calcite* instead of the chemical name *calcium carbonate*. For this seeming redundancy there two reasons:

The formula $CaCO_3$ describes not only the composition of calcite but also that of aragonite, a less common mineral with a different crystal form, hardness, density, and so on; the chemical name calcium carbonate alone does not distinguish between calcite and aragonite.

Calcite often contains small quantities of $MgCO_3$ and $FeCO_3$, and its composition is not precisely represented by the formula $CaCO_3$ because the iron and magnesium carbonates form an integral part of the calcite structure with Fe and Mg atoms replacing some of the Ca atoms in the crystal lattice.

Many other mineral formulas besides that of calcite apply to two or more distinct substances and most minerals show a similar slight variability in composition. Hence chemical names are seldom really applicable, and the student of minerals finds necessary a new nomenclature.

Luckily, for present purposes we need only a few additions to our vocabulary. More than 2,000 different minerals are known, but most of these are rare. Even among the commoner minerals, the greater number occur abundantly only in occasional veins, pockets, and layers. The number of minerals that are important constituents of ordinary rocks is surprisingly small, so small that acquaintance with less than a dozen is adequate for an introduction to geology.

Mineral Properties

Common minerals are not only limited in number but are also easily recognisable with some experience, often by appearance alone. To distinguish the rarer minerals microscopic examination and chemical tests may be necessary, but for the minerals that compose ordinary rocks such simple physical properties as density, colour, hardness (Table), and crystal form make identification relatively straightforward.

In describing the important rock-forming minerals, two properties need special attention: *crystal form* and *cleavage*. Most minerals are crystalline solids, which means that their tiny particles (atoms, ions, or atom groups) are arranged in lattice structures with definite geometric patterns. When a mineral grain develops in a position where its growth is not hindered by neighbouring crystals, as in an open cavity, its inner structure expresses itself by the formation of perfect crystals, with smooth faces meeting each other at sharp angles. Every mineral has crystals of a distinctive shape so that well-formed crystals make recognition of a mineral easy; unfortunately good crystals are rare, since mineral grains usually interfere with one another's growth.

Table 2

The hardness scale. Each mineral can scratch those lower on the scale and in turn can be scratched by those higher on the scale. A fingernail is about 2.5 in hardness and a knife blade is about 5.5.

1. Talc (softest)
2. Gypsum
3. Calcite
4. Fluorite
5. Apatite
6. Orthoclase
7. Quartz
8. Topaz
9. Corundum
10. Diamond (hardest)

Even when well-developed crystals are not present, however, the characteristic lattice structure of a mineral may reveal itself in the property called *cleavage*. This is the tendency of a substance to split along certain planes, which are determined by the arrangement of particles in its lattice. When a mineral grain is struck with a hammer, its cleavage planes are revealed as the preferred directions of breaking; even without actual breaking, the existence of cleavage in a mineral is usually shown by flat, parallel faces and minute parallel cracks. The flat surfaces of mica flakes, for instance, and the ability of mica to peel off in thin sheets show that this mineral has almost perfect cleavage. Some minerals (for example, quartz) have practically no cleavage; when struck they shatter, like glass, along random curved surfaces. The ability to recognise different kinds and degrees of cleavage is an important aid in distinguishing minerals.

3. Answer the following questions:

1. What are rocks?
2. What do rocks consist of?
3. How can the separate minerals be discerned in rocks?
4. Why do certain substances occur as minerals and why do not others?
5. What does the study of minerals require?
6. Do most minerals show in composition?
7. What properties need special attention in describing the important rock-forming minerals?

4. Put questions to the following statements:

1. Rocks are aggregates of substances called *minerals*, which are crystalline solids with fairly definite compositions and structures.

2. The number of minerals that are important constituents of ordinary rocks is surprisingly small.

3. Various metals are obtained from deposits of sulphide minerals, such as galena (lead sulphide) and sphalerite (zinc sulphide).

4. Every mineral has crystals of a distinctive shape so that well-formed crystals make recognition of a mineral easy.

5. Insert the missing letters and translate the following words:

cr…stal…ine, sub…tan…e, a…quaint…nce, in…er…ere, …ar…onates, reco…nitio…, …ro…erty, cl… …vage, ab…ndan…ly, q…a…tity, s…rfa…e, re…e…l, …avit…, la… …ice, …aralle…, strai…htfor…ard, du…licate..., li...est...ne, ide...tifi...ation, f...rmul..., li...ui..., ...rack..., ag...re...ates, dist...ncti...e, ...icrosc...pic, patt...r..., app...ren....

6. Read the text again carefully, looking up anything you do not understand. Then answer the following questions:

1. From the headings to the two main sections of the text, what do you expect the two sections will be about?

2. What does the table show?

3. What is a *mineral*?

4. What rock is made up of one mineral only?

5. Is chlorine a chemically inactive element?

6. What do sodium chloride, sodium carbonate and potassium have in common?

7. What are the commonest minerals?

8. Why do you need to learn a special list of names to study minerals?

9. How many minerals are known to exist?

10. To start studying geology, how many minerals do you need to know about?

11. What are crystal form and cleavage?

12. Does every mineral contain crystals of the same shape?

7. Look at the first two paragraphs and say which words are used to mean:

- different materials brought together into a mass
- most/ the greater part or number

- distinguish
- can be dissolved in a liquid
- likely to move or change

8. Look at paragraph 3 and find three words that have the opposite meaning to *rare*.

9. Look at paragraphs 4, 5 and 6 and say which words in the text you could replace with:

- amounts
- exactly
- rarely
- changeability
- sufficient/ enough

10. Look at paragraph 7 and say which words in the paragraph mean:

- the way something looks
- make up
- uncomplicated/easy

11. Look at the rest of the text and explain what these words mean:

- crystalline solid
- grain
- cavity
- plane
- parallel
- flake

12. Complete the following paragraph, using each of these words once:

substance, variety, various, abundant, combine, structure, free, compound

Next to oxygen, the most …… element in the earth's crust is silicon. Silicon never occurs …… in nature, but its …… make up about 87 percent of the rocks and soil under our feet. Nearly all the earth's silicon is either …… with oxygen alone or with oxygen and one or more metals in the …… silicate minerals. As a class, these …… are crystalline solids with high melting points. Their differences in composition and …… are reflected in a …… of colours, hardnesses and crystal forms.

13. Complete the following paragraph using appropriate forms of the words in brackets:

Clay is an (especial) …… (interesting) …… material because of its ability to absorb (large) …… amounts of water. This ability can be traced to the layered structures of the clay minerals. In many of these minerals, each layer is (electrical) …… polarised, with one side exhibiting a (slight) …… (positive) …… charge and the other a (slight) …… (negative) …… charge. (Adjacent) …… layers are held together by the attractions of the (opposite) …… charges that face each other; since the layers are only (weak) …… polarised, the bonds between the layers are (feeble) …… , and (dry) …… clay crumbles (easy) …… .

14. Unscramble the following words and translate them:

Agagretegs, cyrsltas, rgaitne, mlietsone, lcevagae, elatitc, psroerptie, cocuspiunos, sdeitny, ngari, nmiuet, crhaactristeic, vriaabiylit, palicabple, vcaiyt, reogcniiton, cmpoosiiton, htaster, smiccroopic, svien.

15. Match the word with its explanation:

composition	- the total after a lot of different figures or points have been added together;
crystals	- substances that are formed naturally in the earth, such as coal, salt, stone, or gold; minerals can be dug out of the ground and used;
minerals	- a small regular-shaped piece of a substance, formed naturally when this substance becomes solid; a rock or a piece of rock that is clear;
property	- physical property of a mineral, the tendency to split along certain preferred planes parallel to an actual or possible crystal face;
cleavage	- a quality or power that a substance has;
hardness	- the hard substance that forms the main surface of the Earth; a piece of rock, that sticks up from the ground;
aggregate	- the way in which something is made up of different parts, things, or members;
lattice structure	- a form of a small regular-shaped substance, a clear piece of rock;

crystal form	- a pattern or a structure made of long pieces that cross each other so that spaces between them are shaped like diamonds; a regular arrangement of objects;
rocks	- the resistance of a substance to scratching, or to indentation under a blow or steady load.

Section 2

1. Think of as many words as possible related to the theme "Global Environmental Problems". What can each of us do to protect the planet's ecosystems?

2. Read and translate the following text using a dictionary:

Most of the world's resources "used up"

Humans have destroyed two-thirds of nature's machinery that supports life.

The human race is living beyond its means. A report backed by 1,360 scientists from 95 countries – some of them world leaders in their fields – warned that almost two-thirds of the natural machinery that supports life on the Earth is being degraded by human pressure.

The study contains what its authors call "a stark warning" for the entire world. The wetlands, forests, savannahs, estuaries and other habitats that recycle air, water and nutrients for living creatures are being irretrievably damaged. In effect, one species is now a hazard to the other 10 million or so on the planet, and to itself.

"Human activity is putting such a strain on the natural functions of the Earth that the ability of the planet's ecosystems to sustain future generations can no longer be taken for granted", it says. The report, prepared in Washington under the supervision of a board chaired by Robert Watson, chief scientist at the World Bank and a former scientific adviser to the White House, was launched at the Royal Society in London. It warns that:

Because of human demand for food, fresh water, timber, fibre and fuel, more land has been claimed for agriculture in the past 60 years than in the 18th and 19th centuries combined.

An estimated 24 % of the Earth's land surface is now cultivated.

Water withdrawals from lakes and rivers has doubled in the past 40 years. Humans now use between 49 % and 50 % of all available freshwater running off the land.

At least a quarter of all fish stocks are over-harvested. In some areas the catch is now less than a hundredth of that before industrial fishing.

Since 1980 about 35 % of mangroves have been lost, 20 % of the world's coral reefs have been destroyed and another 20 % badly degraded.

Deforestation and other changes could increase the risks of malaria and cholera, and open the way for new and so far unknown disease to emerge.

In 1997 a team of biologists and economists tried to put a value on the "business services" provided by nature, the free pollination of crops, the air conditioning provided by wild plants, the recycling of nutrients by the oceans. They came up with an estimate of $ 33 trillion, almost twice the global gross national product for that year.

Flow from rivers has been reduced dramatically. For parts of the year, the Yellow River in China, the Nile in Africa and the Colorado in North America dry up before they reach the ocean. An estimated 90 % of the total weight of the ocean's large predators – tuna, swordfish and sharks – has disappeared in recent years. An estimated 12 % of bird species, 25 % of mammals and more than 30 % of all amphibians are threatened with extinction within the next century.

A growing proportion of the world lives in cities, exploiting advanced technology. But nature, the scientists warn, is not something to be enjoyed at the weekend. Conservation of natural spaces is not just a luxury.

"These are dangerous illusions that ignore the vast benefits of nature to the lives of 6 billion people on the planet. We may have distanced ourselves from nature, but we rely completely on the services it delivers".

3. Answer the following questions:

1. Is the human race supported in abundance with all the natural resources important for life?
2. What situation can we observe in the different habitats?
3. In what state are the different species of the world?
4. Will the planet's ecosystems be able to sustain future generations?
5. What do scientists say about the present-day situation?
6. What can we really do to conservate natural spaces and to economise the world's natural resources?

4. Put questions to the following statements:

1. The wetlands, forests, savannahs, estuaries and other habitats that recycle air, water and nutrients for living creatures are being irretrievably damaged.
2. Human activity is putting a strain on the natural functions of the Earth.

3. The ability of the planet's ecosystems to sustain future generations can no longer be taken for granted.

4. Because of human demand for food, fresh water, timber, fibre and fuel, more land has been claimed for agriculture in the past 60 years.

5. Water withdrawals from lakes and rivers has doubled in the past 40 years.

6. In some areas the catch of fish is now less than a hundredth of that before industrial fishing.

7. Deforestation and other changes could increase the risks of malaria and cholera, and open the way for new and so far unknown disease to emerge.

8. Flow from rivers has been reduced dramatically.

9. A growing proportion of the world's population lives in cities, exploiting advanced technology.

10. We rely completely on the services the nature delivers.

5. Insert the missing letters and translate the following words:

ma…hiner…, wet…a…ds, f…res…s, sava……ahs, estu…ri…s, ha…it…ts, re…y…le, …utri…nts, l…ving cre…tu…es, s…ec…es, h…zar…, st…ain, …u…tain, tim…er, l……nch, …upper…ision, …ibre, fu…l, fi…h sto…ks, f…ture gene…at…ons, ma…grov…s, …efore…tation, po……ination, pre…ato…s, ext…nct…on, b…nefi…s, …onservatio…, wate…wi……drawals.

6. Match a word in A with a word in B and translate the word-combinations obtained:

A	B
living	race
the human	machinery
chief	warning
water	air
natural	creatures
global	damaged
advanced	generations
a stark	scientist
industrial	adviser
available	surface
land	freshwater
scientific	fishing
recycle	withdrawals
irretrievably	gross
future	technology

7. Complete the following paragraph, using each of these words more than once:

environment, resources, predators, surroundings, biotic factors, physical factors

…… is the …… in which animals and plants live. The study of organisms in relation to their …… is called ecology. Organisms are affected by many different …… in their …… , such as temperature, water, gases, light, pressure, and also …… such as food …… , competition with other species, …… and disease.

8. Complete the following paragraph, using each of these words more than once:

pollution, contamination, energy, natural resources, sewage, environmental resource, environmental threat, industrial wastes, noise, hazard, thermal pollution, ecological imbalance, populations, light pollution, wastes

…… is the …… of one substance by another so that the former is unfit for an intended use; or, more broadly, the addition to any natural …… on which life or the quality of life depends of any substance or form of …… at a rate resulting in abnormal concentrations of what is then termed the 'pollutant'.

Air, water and soil are the …… chiefly affected. Some forms of …… , such as urban …… and garbage or inshore petroleum spillage, pose an immediate and obvious …… ; other forms, such as those involving potentially toxic substances found in …… and agricultural pesticides, present a more insidious …… : they may enter biological food chains and, by affecting the metabolism of organisms, create an …… . …… of organisms thriving abnormally at the expense of other …… may themselves be regarded as pollutants. Forms of energy …… include: …… , e.g., factory, airport and traffic noise; …… , e.g., the excessive heating of lakes and rivers by industrial effluents; …… , e.g., the glare of city lights when it interferes with astronomical observations, and radiation from radioactive …… . The need to control environmental …… in all its aspects is now widely recognised.

9. Unscramble the following words and translate them. Then arrange them in the alphabetic order:

meahinryc, gderaed, dralatmicaly, amaalri, mngaroevs, polionlatin, ltehcnoogy, irngoe, witshrawdal, netier, ilusslion, xepilot, iproorpton, enersationg, setiatme, iocnservoatn, avlableai, cyreclign, ohrdswfis, maalsmm, pamhibnsia, meerge, suisipervon, ckssto.

10. Match the word with its explanation:

habitat	- the wide part of a river where it goes into the sea;
estuary	- the natural home of a plant or animal;
pollination	- something that may be dangerous, cause accidents or problems; a risk that cannot be avoided;
extinction	- an area of land that is partly covered with water, or is wet most of the time;
fuel	- wood used for building or making things;
predators	- the parts of plants that you eat but cannot digest; thin thread, or one of the thin parts like threads that form natural materials;
timber	- a substance such as coal, gas, or oil that can be burned to produce heat or energy;
wetland	- when a particular kind of animal or plant stops existing;
fibre	- an animal that kills and eats other animals;
hazard	- giving a flower or a plant pollen so that it can produce seeds.

Unit 13

Section 1

1. Learn the following words and their translation. Check up yourself by back translation:

boundaries	- межа, рубіж
migrate	- мігрувати
drift	- дрейф, розходження
trace	- слід, межа
landmasses	- маси земної товщі
burden	- навантажувати, обтяжувати
rain forest	- тропічний ліс
vegetation	- рослинність
coal	- вугілля
frigid	- холодний
desert	- пустеля, пустиня
convince	- переконувати

startlingly	- навдивовижу, на диво
debris	- уламки, відламки
species	- вид
skull	- череп
envision	- уявляти подумки

2. Read and translate the following text using a dictionary:

Continental Drift

A casual glance at a map of the world suggests the possibility that at some time in the past the continents were joined together in one or two giant supercontinents. If the margins of the continents are taken to be on their continental slopes at a depth of 3,000 ft, instead of their present sea-level boundaries, the fit between North and South America, Africa, Greenland, and western Europe is remarkably exact. But merely matching up outlines of continents is not by itself sufficient evidence that the continents have migrated around the globe. The first really comprehensive theory of continental drift was proposed early in this century by the German meteorologist Alfred Wegener, who based his argument on biologic and geologic evidence.

Wegener's Theory

At one time the standard explanation for the similarity of patterns of early life around the world was a series of land bridges linking the continents together. But this meant that the oceans were then separated from one another, so a series of channels had to be devised to permit aquatic plants and animals to pass between oceans. No really believable scheme of bridges and channels could be devised, and even if one had been, it would still be necessary to account for the disappearance of all traces of them. Wegener was on firm ground when he searched for an alternative to this notion.

What Wegener suggested instead was that originally the continents were all part of a huge landmass he called Pangaea that was surrounded by a single ocean, Panthalassa. Pangaea then began to break up and the continents to slowly drift to their present locations. This model found additional support in geological data regarding prehistoric climates. At one time, South Africa, India, Australia, and part of South America were burdened with great ice sheets, while at the same time a tropical rain forest covered North America, Europe, and China. At various other times, there was sufficient vegetation in Alaska and Antarctica for coal deposits to have resulted, and so currently frigid a place as Buffin Bay was a desert.

Wegener and his followers examined what was known about the climates of the distant past, and tried to arrange the continents in each geologic period so that the glaciers were near the poles and the hot regions were near the equator. The results, in general, were quite convincing and in some cases startlingly so: deposits of glacial debris and fossil remains of certain distinctive plant species follow each other in the same succession in Argentina, Brazil, South Africa, Antarctica, India, and Australia, for example. A recent discovery of this kind was the identification of a skull of the reptile Lystrosaurus in a sandstone layer in the Alexandra mountain range of Antarctica. This creature, which was about three feet long, flourished long ago in Africa. It is as unlikely that Lystrosaurus swam the 2,700 mi between Africa and Antarctica as it is that a land bridge this long connected them, only to vanish completely later on.

Laurasia and Gondwanaland

Today it seems almost certain that Pangaea did exist and later began to break apart into two supercontinents, *Laurasia* (which consisted of what is now North America, Greenland, and most of Eurasia) and *Gondwanaland* (South America, Africa, Antarctica, India, and Australia). Laurasia and Gondwanaland were almost equal in size. The separation of Pangaea into these supercontinents is supported by detailed geological and biological evidence, for instance certain differences between Laurasia and Gondwanaland fossils of the same age.

Laurasia and Gondwanaland were separated by a body of water called the *Tethys Sea*. Today a little of the Tethys Sea survives as the Mediterranean, Caspian, and Black Seas, but its original extent can be gauged from the sediments that were subsequently uplifted to form the mountain ranges that stretch from Gibraltar eastward to the Pacific. The Pyrenees, Alps, and Caucasus of Europe, the Atlas Mountains of North Africa, and the Himalayas of Asia all were once part of the Tethys Sea.

Not long after Pangaea split apart, South America and Africa became detached as a unit from the rest of Gondwanaland, and later they separated as the South Atlantic Ocean came into being. At a later date the Atlantic Ocean completed its extension northward, Australia separated from Antarctica, and India began to drift toward Asia.

The geologic processes responsible for continental drift are on such a huge scale that it is hard to believe they began relatively recently in the history of the earth. Hence it is likely that continental drift was taking place even before Pangaea was formed, and in fact there is some evidence that

Pangaea was the result of the coming together of three earlier landmasses, Gondwanaland, Asia east of the Ural Mountains, and a unit consisting of North America, Greenland, and Europe.

Continental drift, then, has some very attractive aspects. Why was it not widely accepted until very recently? Wegener, who lacked a knowledge of the mechanical properties of the various parts of the earth's crust, envisioned the continents as floating freely over the mantle and having no trouble in moving through the oceans floor. If this were the case, only relatively weak forces would be needed to move the continents over the face of the earth, and Wegener was able to cite several such forces. But the ocean floors are in fact extremely hard and strong, and if enough force could somehow be applied, it seems likely that a continent would buckle rather than pass through the ocean floor.

An entirely different mechanism has proved to be involved, and until its discovery in the middle 1960s continental drift, for all its allure, remained discredited by most geologists.

3. Answer the following questions:

1. What is the main idea in the first paragraph?
2. What was Wegener's suggestion?
3. What evidence is there for continental drift?
4. What was the weakness of Wegener's idea?
5. Is the idea of continental drift now accepted by geologists?
6. What explanation was the accepted one before Wegener's theory?
7. Why was this explanation not credible?
8. What were Pangaea and Panthalassa?
9. What evidence did Wegener have for this theory?
10. Why is the discovery of the Lystrosaurus skull significant?
11. Which supercontinent did your country once belong to?
12. What is the evidence for the existence of the two supercontinents?
13. Does the Tethys Sea still exist?
14. How did Wegener see the continents moving?

4. Put questions to the following statements:

1. At some time in the past the continents were joined together in one or two giant supercontinents.
2. The continents have migrated around the globe.
3. The German meteorologist Alfred Wegener based his really comprehensive theory of continental drift on biologic and geologic evidence.

4. This model found additional support in geological data regarding prehistoric climates.

5. Deposits of glacial debris and fossil remains of certain distinctive plant species follow each other in the same succession in Argentina, Brazil, South Africa, Antarctica, India, and Australia.

6. Today it seems almost certain that Pangaea did exist and later began to break apart into two supercontinents, *Laurasia* and *Gondwanaland*.

7. Continental drift has some very attractive aspects.

5. Insert the missing letters and translate the following words:

su…er…ontinents, all…re, bo…ndari…s, out…i…es, mi…rat…, met…orolo…ist, sk…ll, s…m…larity, a……atic, sc…em…, cha……els, …nv…sion, evi…en…e, d…po…its, sub…eque…tly, slo…es, dep…h, …argi…s, landma……es, co…vincin…, fl……ting, dr…ft, se…im…nts, gau…e, …eparatio…, man…le, su……icient, gl…be, …eolo…ic, argum…nt, …denti…ication, re…tile, e…pla…ation, tra…e, e…uat…r, debr…s, eq…al, ve…eta…ion, …ro…erties, bu…kle, ex…en…ion, d…s…rt.

6. Look at the first paragraph and say which words have the opposite meaning to:

- taken apart
- careful
- stay in one place
- incomplete

7. Look at paragraph 2 and say which words have the same meaning as:

- living in water
- explain
- idea
- joining
- usual

8. Look at paragraph 3 and try to explain the following:

- drift
- ice sheet
- prehistoric
- tropical rain forest
- vegetation

9. Look at paragraph 4 and say which words have the same meaning as:

- persuasive
- surprisingly
- alive and active
- disappear

10. Look at paragraphs 5 and 6; then write sentences that show you know the meaning of:

- fossil
- gauge
- subsequent

11. Look at paragraph 7 and say what the following words refer to:

- line 2: they
- line 3: its

12. Look at paragraph 8 and say what word has the same meaning as:

- therefore

13. Look at paragraph 9 and say what the following words refer to:

- line 1: it
- line 4: this
- line 6: such

14. Match a word in A with a word in B and translate the word-combinations obtained:

A	B
casual	aspects
continental	debris
mechanical	processes
aquatic	crust
earth's	drift
firm	extent
giant	evidence
glacial	plants
attractive	glance
geologic	properties
sufficient	supercontinents
sea-level	theory
comprehensive	boundaries
original	ground

15. Arrange the following words to make up sentences:

The first really comprehensive theory of continental drift was proposed early in this century.

the German meteorologist Alfred Wegener based his argument of continental drift on biologic and geologic evidence.

Originally the continents were all part of a huge landmass he called Pangaea that was surrounded by a single ocean, Panthalassa.

At one time, South Africa, India, Australia, and part of South America were burdened with great ice sheets.

16. Unscramble the following words and translate them:

ocntinetsn, tseimdens, lasndmaess, ogeloicagl, nmlate, cauaqti, laurle, rsmeain, otslinue.

17. Complete the following paragraph, using each of these words once:

continental-drift theory, earth's crust, continents, plates, rocks, ocean basins, convection currents, midocean ridge, mantle, earthquakes, volcanoes, geologists

The …… , once thought to be relatively fixed, is now known to be composed of a mosaic of …… that shift over long periods of time, changing the configurations of the …… and the …… . This is the theory of 'plate tectonics' – the modern version of the …… proposed by Alfred Wegener in 1912. The mechanism that powers the moving plates is still not perfectly understood, but it probably involves …… in the earth's mantle. In this scheme, the light continental …… ride on top of basalt plates somewhat like packages on a conveyor belt. When plates move apart, new crust is created along the global …… . At the same time, when one plate pushes beneath another, old crust is melted as the heavier plate descends into the …… . The movement of the plates against one another builds mountains, creates faults, causes …… , and explains why the world's …… are located where they are.

The theory of plate tectonics is the most significant recent development in the earth sciences but it builds, of course, on the work of …… of the past few hundred years.

18. Match the word with its explanation:

continental drift	- a piece of ground or a surface that it is higher at one end than the other;
continental slopes	- the very slow movement of the continents across the Earth's surface
earth's crust	- lines of mountains;

ocean floor	- plants living or growing in water;
mechanical properties	- animals living in water;
mountain ranges	- the hard outer layer of the Earth, one of the three zones which the earth's solid body can be divided;
aquatic plants	- the ground at the bottom of the ocean;
aquatic animals	- relating to or produced by physical forces
allure	- solid substances that settle at the bottom of liquid;
sediments	- a mysterious, exciting, or desirable quality.

Section 2

1. Think of the following questions:

1. What is a glacier?
2. Where are glaciers situated?
3. What is the role of glaciers for global environmental balance?

2. Read and translate the following text using a dictionary:

Antarctic glaciers retreat under climate onslaught

Glaciers on the Antarctic peninsula are shrinking rapidly as a result of climate change, scientists have found.

In the most comprehensive study of its kind, researchers measured 244 glaciers, each typically stretching tens of kilometres from the Antarctic mountains to the surrounding seas. They found that 87 % had retreated significantly in the past 50 years.

The peninsula is the most northern part of Antarctica, and the only part of the continent that extends outside the Antarctic circle. It lies in the western hemisphere, facing South America.

Alison Cook, a scientist with the British Antarctic Survey, built up a picture of the glaciers' history by taking measurements from more than 2,000 aerial photographs taken since the 1940s, along with more than 100 modern satellite images. She found that the vast majority of glaciers had begun to shrink, with the most dramatic retreats being seen since the turn of the millennium. Temperatures in the region have increased considerably, with a rise of more than 2^0C in the past 50 years. Scientists are unsure whether the increase – up to five times greater than would be expected from typical global

warming – can be attributed solely to man-made climate change or is exacerbated by natural climate variation.

The retreat of the glaciers could have minor benefits for local wildlife, as previously covered ground becomes exposed, though the long-term effects of such an ecological change are hard to predict.

Although the steady loss of the glaciers is unlikely to lead to local ecological disaster, the speed with which they are disappearing was an alarming indication of the effects of climate change.

According to the study, which was carried out with researchers at the US Geological Survey and appears in the current issue of the journal Science, the Sjogren glacier at the northern end of the peninsula has retreated the most, 13 km since 1993, while the Widdowson glacier on the peninsula's west coast has shrunk the fastest, at the rate of 1,100 m a year for the past five years.

3. Translate the following expressions and try to express their meaning:

Climate change, comprehensive study, taking measurements, global warming, ecological change, ecological disaster.

4. Answer the following questions:

1. Why are glaciers on the Antarctic peninsula shrinking rapidly?
2. What have the scientists found in one of the most comprehensive studies?
3. Where is the Antarctic peninsula situated?
4. What has Alison Cook found?
5. What can the retreat of the glaciers result in?
6. What is an alarming indication of the effects of climate change?
7. What was found in the study, which was carried out with researchers at the US Geological Survey?

5. Put questions to the following statements:

1. Glaciers on the Antarctic peninsula are shrinking rapidly as a result of climate change.
2. Researchers measured 244 glaciers and found that 87 % of the glaciers had retreated significantly in the past 50 years.
3. The scientists found that the vast majority of glaciers had begun to shrink.
4. Temperatures in the region have increased considerably.
5. Scientists are unsure what to expect from typical global warming.

6. The retreat of the glaciers could have minor benefits for local wildlife, though the long-term effects of such an ecological change are hard to predict.

7. The speed with which glaciers are disappearing is an alarming indication of the effects of climate change.

6. Insert the missing letters and translate the following words:

p…nin…ula, com…re…ensive, si…nifican…ly, he…isp…ere, s…rve…, sate……ite, mil…e…nium, s…l…ly, wa…m…ng, re…re…t, pr…d…ct, di…as…er, c…im…te, ac…ord…ng, is…ue, co…st, a…arm…ng, me…sure…ents.

7. Match a word in A with a word in B and translate the word-combinations obtained:

A	B
climate	variation
satellite	photographs
global	issue
alarming	change
ecological	indication
current	warming
dramatic	change
climate	retreats
local	mountains
Antarctic	wildlife
aerial	images

8. Complete the following paragraph, using each of these words more than once:

earth's landscape, glaciers, ice sheets, conditions, precipitation, latitude, delugelike floods,

The …… also is continually sculpted by wind, rivers, and – perhaps most dramatically – …… . There are three recognised types of glacier: …… and caps, mountain or valley …… , and piedmont …… .

…… form wherever …… are such that annual …… of snow, sleet, and hail exceeds the amount that can be lost through evaporation or melting. Thus, the occurrence of …… depends much on …… as well as on local topography; there are several …… at high altitudes on the equator. In the great ice ages of the past (the most recent of which reached its maximum about 18,000 years ago), …… determined much of the world's climate, drastically affected sea levels (the more of the world's water budget

that is locked up in ice, the lower the sea level), and very possibly created …… when they melted (glaciologists now think that …… decay about five times as quickly as they grow). Even today, …… account for 75 % of the worlds supply of fresh water, with the Antarctic ice sheet alone representing 85 % of this.

9. Match the word with its explanation:

peninsula	- a large mass of ice which moves slowly down a mountain valley;
glacier	- a piece of land almost completely surrounded by water but joined to a large area of land;
hemisphere	- a catastrophe that causes great damage to nature;
ground	- a picture or shape of an object made with a machine that has been sent into space and goes around the earth, moon etc, used for radio, television, and other electronic communication;
satellite images	- the surface of the earth; the soil on and under the surface of the earth;
wildlife	- a permanent natural change in climate conditions;
ecological disaster	- a half of the earth, especially one of the halves above and below the equator.
climate variation	- animals and plants growing in natural conditions

Unit 14

Section 1

1. Learn the following words and their translation. Check up yourself by back translation:

poise	- балансувати, ширяти
solar system	- сонячна система
satellites	- супутники
asteroids	- астероїди
comets	- комети
meteors	- метеори
vicinity	- сусідство, близькість
dust speck	- пилинка, порошинка

revolve	- обертатися
rotate	- обертатися
counterclockwise	- проти годинникової стрілки
plane	- плоскість, площина
by virtue of	- завдяки, дякуючи
crescent	- півмісяць

2. Read and translate the following text using a dictionary:

The Solar System

To the largest modern telescope as to the naked eye, a star is no more than a tiny point of light. Most of the planets, on the other hand, are magnified to clear disks by a telescope of even modest power. This does not mean that the planets are larger than the stars, of course, but only that they are much closer to us. If we use a golf ball to represent the sun, a small sand grain a dozen feet away represents the earth on the same scale. Pluto would be another sand grain 500 ft from the golf ball. Within the 1,000-ft-wide orbit of Pluto are all the other planets. In this model, the nearest star would be another golf ball 600 mi away.

The earth and the sun and the other eight planets are isolated in space. This set of nine spheres that circle the bright sun is poised in emptiness and separated by unimaginable distances from everything else in the universe. Because the sun is its central figure, the family of bodies that accompanies it is called the *solar system*.

Until the seventeenth century the solar system was thought to consist of only five planets besides the earth and moon. In 1609, soon after having heard of the invention of the telescope in Hilland, Galileo built one of his own and was able to add four new bodies to the system: the brighter of the moons (or *satellites*) that revolve around Jupiter. Since Galileo's time telescopic improvements have made possible the discovery of many more members of the sun's family.

The list of planets now includes nine; in order from the sun they are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. All except Mercury, Venus, and Pluto have satellites. Thousands of small objects called *asteroids*, all less than 500 mi in diameter, follow separate orbits about the sun in the region between Mars and Jupiter. Comets and meteors, in Galileo's time thought to be atmospheric phenomena, are now recognized as still smaller members of the solar system.

Not only is the entire solar system isolated in space, but each of its principal members is separated from the others by vast distances. From the earth to our nearest neighbour, the moon, is about 238,000 mi; from the earth to the sun is about 93 million mi. It took the Apollo 11 spacecraft 3 days to reach the vicinity of the moon, and at the same rate of progress more than 3 years would be needed to reach the sun.

Let us return for a moment to the model mentioned at the start of the text in which a golf ball represented the sun and a grain of sand 12 ft away the earth. On this scale the moon would be scarcely more than a dust speck about ½ in from the sand grain. The largest planet, Jupiter, would be a small pebble 60ft from the golf ball.

With three smaller pebbles, three more sand grains, and a few more dust specks, all within 1,000-ft-wide orbit of Pluto, the model is complete. An extremely empty structure, this solar system, with its members separated by distances enormous compared with their size.

Planets *revolve* around the sun and *rotate* on their axes. Two further aspects of the solar system are notable:

1. Nearly all the revolutions and rotations are in the same direction, which is counterclockwise as seen looking down from above the North Pole. Only the rotation of Venus and the revolutions of a few satellites are in the opposite direction. Uranus is an exception of a different kind, since it rotates about an axis only 8˚ from the plane of its orbit.

2. All the orbits except those of the comets lie nearly in the same plane.

Planets, asteroids, and satellites are visible by virtue of the sunlight they reflect. What we see of any of these objects at a particular time is limited to the half that faces the sun. Planets with orbits larger than that of the earth never come between us and the sun, so we can always see nearly the whole of their illuminated sides. Mercury and Venus, however, have orbits smaller than the earth's and are between us and the sun for a good part of each revolution. In this position their dark sides are turned toward us, and we see them either not at all or as crescents.

3. Answer the following questions:

1. What is the solar system?
2. How many planets are there?
3. Why do planets shine?
4. What does the writer use to represent the sun in the model?
5. In the model, how far away is Pluto?
6. What did Galileo discover?

7. What is an asteroid?
8. What is the distance from the earth to the sun?
9. In the model, how large is the moon?
10. How do planets move?
11. Which planets do not come between the earth and the sun?

4. Put questions to the following statements:

1. The Earth and the Sun and the other eight planets are isolated in space.
2. The list of planets now includes nine: they are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto.
3. Mercury and Venus have orbits smaller than the Earth's.
4. Asteroids, comets, and meteors are also members of the solar system.
5. Pluto's orbit is the most elliptical.
6. Planets revolve around the sun and rotate on their axes.
7. Not only is the entire solar system isolated in space, but each of its principal members is separated from the others by vast distances.

5. Look at paragraphs 1 and 2 and say which words have the same meaning as:

- very small
- on its/their own
- made bigger
- sphere

6. Look at paragraph 3 again and try to explain the words:

- comet
- meteor
- satellite
- asteroid

7. Look at paragraph 5 and again explain the difference between:

- speck
- grain
- pebble

8. Look at paragraphs 6 and 7 again. Write sentences that show you know the meaning of:

- rotate

- revolve
- counterclockwise
- illuminate
- crescent
- orbit

9. Use your dictionary and complete the following table:

Verb	Noun	Adjective
revolve	…….	……
…….	invention	……
…….	system	……
rotate	…….	……
…….	circle	……
represent	…….	……

10. Insert the missing letters and translate the following words:

t…l…scope, ma…nif…, mo…es…, s…ale, g…ain, or…it, sp…e…es, em……iness, uni…aginab…e, a…comp…ny, in…enti…n, re…ol…e, im…rove…ents, sate……ites, a…tero…ds, a…mosp…eric, eighbo…r, vi…ini…y, s…ar…ely, pe……le, revo…utio… .

11. Arrange the following words to make up sentences:

All except the orbits comets those the of lie the same nearly in plane.

Planets their revolve on sun and the rotate axes around.

The of planets includes now list nine; order in from are sun the they Neptune, Venus, Jupiter, Earth, Saturn, Mars, Uranus, and Pluto, Mercury.

The earth and sun isolated other eight the are in planets space.

Until of the century the thought solar was system to five the consist only planets earth besides and seventeenth moon.

12. Complete the following paragraph, using each of these words more than once:

solar system, moon, sun, star, incandescent, frontier, sunspots, corona

The …… has become our new …… . The …… has been reached by man. Voyager I and II have sent us superb photos of Jupiter and Saturn, and Voyager II is going to Uranus and Neptune. All depends, of course, on the …… . The …… , an …… ball of gases, is a normal, smallish …… , lying in one of the spiral arms of the Milky Way. The temperature at the centre of the …… is more than 15,000,000 K; in the

……'s chromosphere occur …… , flares and prominences, the last being great plumes of gas that surge out into the …… and occasionally off into space. The earth lies within the sun's …… , called solar wind. Binary stars revolve around a common centre of gravity; a and a black hole can do the same.

13. Make complete sentences out of the following notes, putting the verbs in brackets in the right tense. Then arrange the sentences into two paragraphs. Make sure that each paragraph makes sense, and that the sentences follow each other logically. Start with the heading:

Meteors

- meteoroids/ through/ atmosphere/ rapidly/ swiftly/ the/ by/ friction (move; heat);
- so/ substantial/ sometimes/ large/ that/ a/ surface/ to/ they/ to begin with/ the/ earth's/ portion (be; get through);
- tons/ these/ dustlike/ planet/ daily/ of/ many/ fine/ micrometeorites/ our (reach);
- random/ occurrence/ of/ in/ meteors/ these/ most (be);
- follow/ showers/ when/ the/ swarm/ meteors/ of/ a/ earth/ the/ through/ orbit/ about/ same/ the/ sun/ the (come about; move);
- fragments/ matter/ earth/ the/ small/ as it travels/ space/ meteoroids/ that/ of/ through (be; meet);
- largest/ meteorites/ fallen/ tons/ the/ known/ meteoroids/ several/ called (weigh);
- October 19 – 23/ year/ May 4 – 6/ conspicuous/ the/ meteor showers/ about/ August 10 – 14/ every/ most/ and (can see);
- average/ clear/ many/ a/ observer/ an/ an/ keen/ hour/ on/ night/ as/ 10 meteors/ as/ (can spot);
- completely/ streaks/ the/ 60 mi/ the/ usually/ in/ bright/ earth/ above/ they/ as/ sky/ about (burn up; appear);
- masses/ a/ less/ most/ gram/ meteoroids/ of/ than (have);
- smallest/ atmosphere/ that/ through/ burning up/ meteoroids/ so/ the/ they/ light/ the/ without (be; float);
- pattern/ or/ place/ they/ no/ either/ the/ time/ particular/ in/ the/ that/ they/ sky/ in (follow; appear);
- of/ several/ with/ 100/ visible/ 50/ per/ to/ meteor showers/ at/ specific/ year/ more/ or/ hour/ great/ meteors/ times (occur).

14. Match a word in A with a word in B and translate the word-combinations obtained:

A	**B**
atmospheric	improvements

particular	disks
naked	structure
dust	grains
sand	direction
opposite	eye
solar	sides
empty	speck
illuminated	system
clear	time
telescopic	phenomena

15. Complete the following paragraph, using each of these words more than once:

astronomers, sun, sun's atmosphere, corona, telescopes, eclipse

The temperature of the …… is over 10,000 degrees Fahrenheit at the surface, but it rises to perhaps more than 27,000,000° at the centre. The …… is so much hotter than the Earth that matter can exist only as a gas, except perhaps at the core. In the core of the …… , the pressures are so great that, despite the high temperature, there may be a small solid core. However, no one really knows, since the centre of the …… can never be directly observed.

Solar …… do know that the …… is divided into five general layers or zones. Starting at the outside and going down into the …… , the zones are the …… , chromosphere, photosphere, convection zone, and finally the core. The first three zones are regarded as the …… . But since the …… has no solid surface, it is hard to tell where the atmosphere ends and the main body of the …… begins.

The ……'s outermost layer begins about 10,000 miles above the visible surface and goes outward for millions of miles. This is the only part of the …… that can be seen during an …… such as the one in February 1979. At any other time, the …… can be seen only when special instruments are used on cameras and …… to block the light from the photosphere.

The …… is brilliant, pearly white, filmy light, about as bright as the full moon. Its beautiful rays are a sensational sight during an …… . The ……'s rays flash out in a brilliant fan that has wispy spikelike rays near the ……'s north and south poles. The …… is generally thickest at the ……'s equator.

The …… is made up of gases streaming outward at tremendous speeds that reach a temperature of more than 2 million degrees Fahrenheit.

The gas thins out as it reaches the space around the planets. By the time the gas of the …… reaches the Earth it has a relatively low density.

16. Unscramble the following words and translate them then arrange them in the alphabetic order:

lteesopec, arstseoid, vinityci, pemyt, ctustrure, emtorse, tlepisecoc, iprotsvemmen, spkec, gnsrai, paculrtiar, tidriecon, tmodse, ositeppo, nsad, astmopehric, usdt, xeas, exptcoein, sctrtruue, poerw, cales, rensvlutoio, senrmoou, saeteitll, cowisunclocterke, emnesptis, atiorotn, enreti, sligunht, kedna, borit, bbpele, mono, arycscel, searapte.

17. Match the word with its explanation:

telescope	- in the area around a particular place or close to a particular amount of measurement;
naked eye	- natural light that comes from the sun;
vicinity	- a piece of equipment shaped like a tube, used for making distant objects look larger and closer;
sunlight	- if you can see something visible without using anything to help you, such as telescope;
orbit	- a straight line from one side of a circle to the other side, passing through the centre of the circle, or the length of this line;
dust speck	- a single very small piece of a substance consisting of very small pieces of rocks and minerals, that forms beaches and deserts;
sand grain	- a very small spot or piece or very little amount of dry powder consisting of extremely small bits of earth or sand or another particular substance;
asteroid	- a natural object that moves around a planet;
satellite	- one of the many small planets that move around the sun especially between Mars and Jupiter;
diameter	- the curved path travelled by an object which is moving around another much larger object such as the sun, the Earth.

Section 2

1. Read and translate the following text with the help of a dictionary:

Stellar Evolution

A star shines because it is a large, compact aggregate of matter that contains abundant hydrogen. A body of this sort cannot avoid being luminous because of the energy liberated in the conversion of its hydrogen into helium. We may imagine as the starting point in a star's history a stage when its matter was an irregular mass of cool, diffuse gas and small, solid particles. Gravitation in such a mass would concentrate it into a smaller space. The gradual contraction would heat the gas, much as the gas in a tire pump is heated by compression. At length the temperature would grow high enough for hydrogen to be converted into helium, and the mass would begin to glow brightly. From this time on the tendency to contract would be counterbalanced by the pressure of radiation from the hot interior, so shrinking would stop and the star would maintain a nearly constant size. The diameter of a star is thus determined by an equilibrium between gravitational forces pulling its material inward and forces due to radiation pushing its material outward.

A star does not shine because some occult force has started it shining; it shines because it has a certain mass and a certain composition. If we could somehow build a star by heaping together sufficient matter of the right composition, it would start to shine of its own accord.

A star consumes its hydrogen rapidly if it is large, slowly if it is small. A fairly small star like our sun makes its supply of hydrogen last for a period of the order of 10 billion years; probably the sun is now about halfway through this part of its career. When the hydrogen supply at last begins to run low in a star like the sun, the life of the star is by no means ended but enters its most spectacular phase. Further gravitational contraction makes the interior still hotter, and other nuclear reactions become possible – particularly reactions in which atoms of heavier elements are made by a combination of helium atoms. These reactions, once started, give out so much energy that the star expands to become a giant. Energy is now being poured out at a prodigious rate, so the star's life as a giant is much shorter than the earlier part of its existence.

Eventually the new energy-producing reactions run out of fuel, and again the star shrinks – although probably not without a few last brief flare-ups, which we see from the earth as *novae* ("new stars") that shine brilliantly for a week or two and then subside into insignificance. The shrinking ultimately reduces the star to the white dwarf state. As a slowly contracting dwarf the star may remain luminous for billions of years more with its energy now coming from the contraction, from nuclear reactions involving elements

heavier than helium, and from proton-proton reactions in a very thin outer atmosphere of hydrogen.

Stars much more massive than the sun have somewhat different histories. Eventually they become unstable and explode violently, emitting enormous amounts of material. Such explosions we observe as *supernovae*, flare-ups 10,000 or more times as luminous as ordinary novae. Having lost perhaps half its mass, a star of this kind can then subside like its smaller brethren into a dwarf star.

Today astronomers believe that the residual dwarfs of supernovae are different from ordinary white dwarfs because of the large mass of their parent stars. These hypothetical dwarfs are calculated to have densities far in excess of ordinary dwarfs, with masses comparable to that of the sun packed into spheres perhaps 15 km (9 mi) in diameter. The matter of such a star would weigh billions of tons per cubic inch. (If the earth were this dense, it would fit into a large apartment house.) Under the pressures that would be present the most stable form of matter is the neutron. *Pulsars*, which emit brief, intense bursts of radio waves at regular intervals, are believed to be rotating neutron stars with magnetic fields that lead to radio emission in narrow beams; as a pulsar rotates, its beams swing with it to produce the observed fluctuations. A notable pulsar is located at the center of the Crab nebula, which is the remnant of a supernova that was seen in AD 1054 and has been expanding and glowing brightly ever since.

2. Answer the following questions:

1. What is a star?
2. Why do stars shine?
3. How do stars form?
4. Where does gravitation concentrate?
5. What does the diameter of a star determined by?
6. What is a novae?
7. What is a supernovae?
8. What is a pulsar?

3. Put questions to the following statements:

1. A star is a large, compact aggregate of matter that contains abundant hydrogen.
2. The energy liberates in the conversion of its hydrogen into helium.

3. A star may remain luminous for billions of years more with its energy now coming from the contraction, from nuclear reactions involving elements heavier than helium, and from proton-proton reactions in a very thin outer atmosphere of hydrogen.

4. Stars that much more massive than the sun become unstable and explode violently emitting enormous amounts of material are observed as supernovae.

5. Today astronomers believe that the residual dwarfs of supernovae are different from ordinary white dwarfs because of the large mass of their parent stars.

4. Insert the missing letters and translate the following words:

Pr…digi…us, be…ms, emi… …ion, pu…sar, hyp…the…ical, su…ern…vae, ex…ess, ne…tro…, dw…rfs, flu…tuat…ons, bu…sts, …tmo…phere, …nte…vals, co…posit…on, nov…e, re…nant, vi…le…tly, hel…um, h…pot…etical, sub…ide, …ravit…tional, s…ecta…ular, com…re…sion, e…uilibri…m, lu…in…us, su… …icient.

5. Complete the following paragraph, using each of these words more than once:

star(s), sun, core

A …… is a large incandescent ball of gases held together by its own gravity. The …… is a fairly normal …… in its composition, parameters and colour. The lifespan of a …… depends upon its mass and luminosity: a very luminous …… may have a life of only one million years, the …… a life if ten billion years, the faintest main sequence …… a life of ten thousand billion years. …… are divided into two categories: Populations I and II. The …… in Population I are slower moving, generally to be found in the spiral arms of galaxies, and believed to be younger. Populations II …… are generally brighter, faster moving and mainly to be found in the spheroidal halo of …… around a galaxy and in the globular clusters. Many …… are double …… . It is believed that …… originate as condensations out of interstellar matter. In certain circumstances a protostar will form, slowly contracting under its own gravity, part of the energy from this contraction being radiated, the remainder heating up the ……: this stage may last several million years. At last the …… becomes hot enough for thermonuclear reactions to be sustained, and stops contracting. Eventually

the …… as a whole ceases contracting and radiates entirely by the thermonuclear conversion of hydrogen into helium.

6. Match a word in A with a word in B and translate the word-combinations obtained:

A	B
compact	particles
residual	intervals
notable	amounts
narrow	atoms
parent	reactions
regular	dwarfs
energy-producing	stars
enormous	aggregate
solid	pulsar
helium	beams

7. Unscramble the following words and translate them then arrange them in the alphabetic order:

aggregate, consume, dwarfs, beams, hydrogen, supernovae, luminous, intervals, residual, density, solid, helium, pressures, spheres, enormous, fluctuations, pulsar, ultimately, rate, phase, novae, neutron, subside, emission, flare-ups, hypothetical, amounts, contraction, matter, equilibrium, abundant, swing, remnant, prodigious, fuel, insignificance.

8. Arrange the following words to make up sentences:

1. A centre notable the is at the of located Crab pulsar nebula.
2. Today believe that the astronomers supernovae residual of are ordinary from dwarfs white different dwarfs.
3. Pulsars brief, emit bursts of intense radio at intervals waves regular.
4. Eventually violently stars unstable and become explode.
5. Gravitational makes the of contraction hotter stars still interior.
6. We gas and imagine the stage when a of matter star was a may an mass irregular of, diffuse solid small, particles cool.

9. Match the word with its explanation:

hydrogen - a gas that is lighter than air and is used to make balloons float. It is a chemical element;

helium	- a colourless gas that is the lightest of all gases, forms water when it combines with oxygen, and is used to produce ammonia and other chemicals. It is a chemical element;
pulsar	- a star which explodes and suddenly becomes much brighter for a short time;
dwarf	- one of a fixed number of changes in the appearance of a planet when it is seen from the Earth or one of the stages of a process of development or change;
supernova	- it is a star which is much smaller than the usual size;
nova	- an object like a star that is far away in space and produces radiation and radio waves;
astronomes	- when you change something from one form, purpose, or system to a different one;
contraction	- a balance between different or forces that compete with each other, so that none is stronger than the others and a situation is not likely to change suddenly;
phase	- a very large exploding star;
equilibrium	- the process of becoming smaller or narrower;
conversion	- scientists who study the stars and planets.

Part 2

General Grammar

Unit 1

Word Order. Wh-questions.

Word Order

Any language is composed of individual words and of grammatical devices for putting them together into large meaningful combinations. Each word makes sense, but the words aren't related to one other in any particular way. *To make a mistake is only human* makes a quite different kind of sense; the words have been put together into a meaningful combination, a sentence.

English has several devices for putting words into sentences. One of the most important ones is word order.

In English, grammatical meaning is largely determined by word order. *Blue sky* and *sky blue* mean different things: in the first, blue describes sky; in the second, sky describes blue. We can see the principle in action in the following:

e. g. The hunter killed the wolf.
The wolf killed the hunter.
My old friend bought a new car.
My new friend bought an old car.
Word Order:

(1) Verb + object

The *verb* and the *object* of the verb normally go together. We do not usually put other words between them:

	Verb +	*object*
I	**like**	**children** very much.
Did you	**see**	**Norman** yesterday?
Ann often	**plays**	**tennis.**

(2) Place and time

We usually say the *place* (where?) before the *time* (when? how often? how long?)

	Place	*Time*
Tom walks	**to work**	**every morning.**
She has been	**in Canada**	**since April.**
We arrived	**at the airport**	**early.**

It is often possible to put the time at the beginning of the sentence:
e.g. **On Monday** I'm going to Paris.
Every morning Tom walks to work.

NOTE!

You cannot use early or late at the beginning of the sentence.

(3) Adverbs with the verb

We put some adverbs (for example *always, also, almost, hardly, often, probably*) with the verb in the middle of a sentence:

e.g. Tom **always goes** to work by car.

We were feeling very tired. We **were also** hungry.

(a) If the verb is one word (goes, cooked), we usually put the adverb before the verb:

	Adverb	*Verb*
Tom	**always**	**goes** to work by car.

NOTE!

The adverbs always, also, often, etc. go before have to, but after am/ is/ are/ was/were:

e.g. We **always have to** wait a long time for the bus.

We were feeling very tired. We **were also** hungry.

The traffic **isn't usually** as bad as it was this morning.

(b) Sometimes a verb is two or more words (**can remember, doesn't smoke, has been stolen** etc.). We usually put the adverb after the first part of the verb:

	Verb 1	*Adverb*	*Verb 2*	
I	**can**	**never**	**remember**	his name.
Ann	**doesn't**	**usually**	**smoke.**	
	Are you	**definitely**	**going** to the party tomorrow?	
Your car	**has**	**probably**	**been stolen.**	

NOTE!

In negative sentences probably goes before the negative.

So we say:

e.g. I **probably** wo**n't** see you. o*r* I will **probably not** see you.

(4) We also use all and both in these positions:

e.g. We **all felt** ill after the meal.

Jack and Tom **have both applied** for the job.

We **are all going** out for a meal this evening.

My parents **are both** teachers.

Practice

1. Decide whether the word order is right or wrong. Correct the sentences which are wrong:

e. g. I like children very much. *RIGHT*

Tom walks every morning to work. *WRONG* – Tom walks to work every morning.

1. Jim doesn't like very much football.
2. Ann drives every day her car to work.
3. When I heard the news, I phoned Tom immediately.
4. Maria speaks very well English.
5. After eating quickly my dinner, I went out.
6. You watch all the time television. Can't you do something else?
7. Jim smokes about 20 cigarettes every day.
8. I think I'll go early to bed tonight.
9. You should go to the dentist every six months.
10. When I heard the alarm, I got immediately.
11. Did you learn a lot of things at school today?
12. How many people do you know who go on Sundays to church?
13. I'm going on Monday to Paris?
14. At the end of the street you'll see on your left a supermarket.
15. Our guide spoke English fluently.

2. Put the parts of a sentence in the correct order:

1. (he won/ easily/ the game)
2. (again/ please don't ask/ that question)
3. (football/ every week-end/ does Ken play?)
4. (quietly/ the door/ I closed)
5. (his name/ after a few minutes/ I remembered)
6. (a letter to her parents/ Ann writes/ every week)
7. (at the top of the page/ your name/ please write)
8. (some interesting books/ we found/ in the library)
9. (opposite the park/ a new hotel/ they are building)
10. (to the bank/ every Friday/ I go)
11. (home/ why did you come/ so late?)
12. (around the town/ all morning/ I've been walking)
13. (recently/ to the theatre/ have you been?)
14. (to London/ for a few days next week / I'm going)
15. (on Saturday night/ I didn't see you/ at the party)

3. Decide whether the words in italics are in the right position or not. Correct the sentences which are wrong:

1. I have a good memory for faces but I *always* forget names.
2. Those tourists over there *probably* are American.
3. Tom gets *hardly ever* angry.
4. We *both* were astonished when we heard the news.
5. I *soon* found the keys I had lost.
6. I did some shopping and I went *also* to the bank
7. Tom has *always* to hurry in the morning because he gets up so late.

8. The baby is very good. She seldom cries during the night.
9. I *usually* am very tired when I get home from work.
10. I *usually* have a bath when I get home from work.
11. I cleaned the house and *also* cooked the dinner.
12. She fell *almost* over as she came down the stairs.
13. The house *only* was built a year ago and it's *already* falling down.
14. We *always* have to wait a long time for the bus.
15. I won't probably see you.

4. Rewrite the sentences and include the word in brackets:

1. Have you been arrested? (ever)
2. I don't have to work on Saturdays. (usually)
3. Does Tom sing when he is in the bath? (always)
4. I'll be late home this evening. (probably)
5. We are going away tomorrow. (all)
6. Don't take me seriously. I was joking. (only)
7. Did you enjoy the party? (both)
8. I've got a lot of housework to do. I must write some letters. (also)
9. Tom goes to work by car. (always)
10. The traffic isn't as bad as it was this morning. (usually)
11. He watches television. (hardly ever)
12. We are going out for a meal this meal. (all)
13. Why are you late? (always)
14. You are here when something happens. (usually)
15. You are right. (probably)

5. Put the words in brackets into the sentences in the correct order:

1. I …… sugar in my tea. (take/usually)
2. "Where's Jim?" "He …… home early." (gone/has/probably)
3. Ann …… very generous. (is/always)
4. Ann and Tom …… in Manchester. (both/were/both)
5. Tim is a good pianist. He …… very well. (sing/also/can)
6. Our television set …… down. (often/breaks)
7. We …… a long time for the bus. (have/always/to wait)
8. My sight isn't very good. I …… with glasses. (read/can/only)
9. I …… early tomorrow. (probably/leaving/will/be)
10. I'm afraid I …… able to come to the party. (probably/be/won't)
11. If we hadn't taken the same train, we …… each other. (never/met/might/ have)
12. Her mum …… a meal in the evening. (always/cooks)
13. We …… that April holiday in January. (usually/book)

14. They think that we …… bread. (probably/got/have)
15. You …… where you're going. (should/always/look)

Wh-questions

Wh-questions begin with a question word (who, what, where, why, when, whose, which, how etc) *"How old are you?"* When there is a reposition, it usually goes at the end of the question. In formal English it can be put before the question word *Who was he accused by?* (more usual) *By whom was he* accused*?* (formal English)

Questions are used to ask for information or permission. They are also used to make suggestions, requests, offers or invitations. ***How*** *far is the station?* (information) etc.

We normally use the following question words to ask about:

People	**Things/ animals**	**Place**	**Time**	**Quant ity**	**Manner**	**Reason**
Who **Whose (possession)** **Which (of)** **What**	What Which (of)	Where	How long How often What time When	How many How much	How	Why

● **Which** is used when there is a limited choice. "***Which*** *is your* favourite film star – Meril Streep or Glen Close?" It can also be used with the comparative and superlative. "**Which** is more comfortable, a bicycle or motorcycle?" "**Which** is the quickest route to Birmingham?"

● **What** is used when there is an unlimited choice. *"**What** kind of music do you like?"* It can also be used in the following patterns: ***What look like?*** (asking for a description of physical appearance), ***What for?, What colour?, What size?, What kind/sort?, What time?, What is he like?*** (asking for a description of character), ***What is it used for?*** etc "***What colour*** are his eyes?" "***What is*** your new teacher ***like***?" – "He is friendly and patient." "***What*** does Ann ***look like***?" "She's slim with a fair complexion."

● **What** and **which** are sometimes both possible. ***Which/What*** fruit does he like eating?

Subject/Object Questions: If **who, which** or **what** are the subject of the question, the word order is the same as in statements (subject questions). If they are the object of the question, the verb is in question form (object questions).

subject		**object**	**subject**		**object**
Greg		**David**	**David**	**hit**	**Paul**

	hit				

Who hit David? (not: Who did hit David?) Who did David hit?

Practice

1. Fill in: who, whose, which, what, where, how long, how often, what time, when, how many, how much, how or why:

1. "…… starred in the film "The Godfather?" "Al Pacino."
2. "…… calories do you consume every day?" "About 1,800."
3. "…… of these skirts do you prefer, the blue or the pink?" "The blue one."
4. "…… do you go to the gym?" "About once a week."
5. "…… sugar do you take in your coffee?" "One spoonful."
6. "…… are we going to the restaurant?" "At 6 o'clock.."
7. "…… did it take you to write your essay?" "About five hours."
8. "…… are you crying?" "I've hurt my arm."
9. "…… does your sister get back from Portugal?" "Next Wednesday."
10. "…… is your favourite colour?" "Purple."
11. "…… are you going on holiday this year?" "South Africa."
12. "…… pen is this? I found it on the floor." "It's mine."
13. "…… do you leave home in the morning?" "About 8 o'clock.."
14. "…… did you manage to break your arm?" "I fell off my bicycle."
15. "…… is the new restaurant like?" "It's extremely elegant."
16. "…… are the children up to?" "I don't know."
17. "…… is the fastest way to get to Paris from here?" "By plane."
18. "…… didn't you call me earlier?" "I was busy."
19. "…… is your favourite subject at school?" "Latin."
20. "…… money have you got left?" "None."

2. Ask questions where the word/phrase in bold is the answer:

1.Pete work for **British Telecom**. ……....
2. Sara owns **two** cars. **....**…….…….
3. She is **tall and fair**. ……..……..…
4. It's **nearly seven o'clock**. ……..……
5. I have French lessons **twice a week**. …….……
6. She's **very shy and quiet**. …….
7. I went to **Hawaii** on holiday. ……....……

8. There are **six students** in my class. ……
9. I wasn't at work today **because I was ill**. ……..
10. **David's** car was stolen. ……...…….
11. **Shakespeare** wrote "King Lear". ……
12. We've lived here **for ten years**. ……...…
13. My new car cost **$ 10,000.** ……...……
14. Kay's gone out **shopping**. ……...…….
15. I'm not going out **because it's cold**. ……....
16. Shirley got married to **Ben**. …….…….
17. That's **my** pen. ..……..……..
18. The **history exam** was the most difficult. ……
19. I get up at **eight o'clock** in the morning. ……..
20. That man is **the new director**. …….
21. She lives **in the suburbs**. …….

3. Write questions for the sentences below. The words in bold should be the answer:

1. **Tom** broke the window. …….
2. Jill invited **Paul** to the party. ……..
3. Lions live in **Africa**. ……....
4. **Antony** arrived late. ……..**....**
5. Peter opened **the door**. ……....
6. Kate gave the letter **to Julie**. ……..
7. **Jenny** forgot to do her homework. …….
8. He likes **basketball**. ……....
9. **Hugh** was rude to Jill. ……
10. **Jo** lost her purse. ……..
11. **Professor Evans** gave the lecture. ……....
12. **Jane** lost the keys to her car. ……
13. **Phil** borrowed your car. ……
14. Sue dropped **her glasses**. ……..
15. **Tracy** loves ice cream. …….
16. Jeremy saw **his teacher**. ……....
17. James bought **a Coke**. ……..
18. Jenny married **Bill**. ……....

4. Write questions to which the bold type words are the answers:

Although it is commonly assumed that **tortoises are simply small domestic pets**, a number of large species of tortoise have been living **in their**

natural environment for centuries. Tortoises **in tropical regions** can exceed three feet in length and records show that before it became extinct, the atlas tortoise measured **almost six feet**. The turtle is very similar to the tortoise but lives **in the sea** rather than on the land. In recent years turtles have been fished for **food and their valuable oil**. **Conservationists** are concerned about this trend, as **turtles may soon become extinct**.

1. What …… .?
2. Where …… ?
3. Where …… ?
4. How long …... ?
5. Where …… ?
6. What for ……. ?
7. Who ……..... ?
8. What ……... ?

5. Make questions with "who" or "what":

1. Somebody hit me. Who……..
2. I hit somebody. Who……..
3. Something happened. What…….....
4. Someone lives in that house. *Who*…….
5. Somebody gave me this key. *Who*…….
6. Henry gave me something. *What*……...
7. Tom meets someone every day. *Who*……
8. I fell over something. *What* ……
9. Something fell on the floor. *What* …….
10. This word means something. *What* …….
11. He wants something to eat. *What* ……
12. Someone invented the steam engine. *Who*…….
13. Something happened to you last night. *What* ……
14. Somebody will go on holiday next summer. *Who*…….

Unit 2

Nouns. Determiners. Pronouns. Adjectives

Countable – Uncountable nouns

Nouns can be **countable** (those that can be counted) *1 egg, 2 eggs* etc or **uncountable** (those that can't be counted) *bread, wood*, etc. **Uncountable nouns take a singular verb and are not used with** *a/an. Some, any, no, much, etc* can be used with them. *Luggage is obtained from the Luggage*

Reclaim Area. Can I have some bread, please? but: a relief, a pity, a shame, a wonder, a knowledge (of smth), a help. What a relief! What a pity! What a shame!

Uncountable nouns are:

Mass nouns (fluids, solids, gases, particles): beer, blood, bread, butter, air, oxygen**,** corn, flour, etc.

Subjects of study: history, literature, maths, physics, accountancy, chemistry,

economics, etc.

Languages: Spanish, French, Japanese, Portuguese, Italian, Chinese, etc.

Games: baseball, billiards, football, golf, darts, rugby, cricket, cycling, etc.

Diseases: flu, pneumonia, measles, mumps, chickenpox, tuberculosis, etc.

Natural phenomena: darkness, fog, gravity, hail, snow, sunlight, shade, etc.

Some nouns: accommodation, advice, anger, applause, assistance, behaviour, business, chaos, countryside, courage, dirt, education, evidence, homework, housework, information, intelligence, knowledge, luck, music, news, peace, progress, seaside, shopping, traffic, trouble, truth, wealth, work, etc.

Collective nouns: baggage, crockery, cutlery, furniture, jewellery, luggage, machinery, money, rubbish, stationery, etc.

NOTE!

With expressions of duration, distance or money meaning "a whole amount" we use a singular verb. e.g. Two months was too long to spend in hospital.

Many uncountable nouns can be made countable.

A piece of paper/cake/information/advice/furniture; a glass/bottle of water/beer/wine; a jar of jam; a rasher of bacon; a pint of beer; a box/sheet of paper; a packet of tea; a slice/loaf of bread; a pot of yoghurt; a pot/cup of tea; a kilo/pound of meat; a tube of toothpaste; a bar of chocolate/soap; a bit/piece of chalk; an ice cube; a lump of sugar; a bag of flour; a pair of trousers; a game of soccer; a (an) item/piece of news; a drop/can of oil; a can of Coke; a carton of milk; a block of wood, etc.

Plural Nouns

Objects consisting of two parts: **garments** (trousers, pyjamas, etc), **instruments** (binoculars, compasses), **tools** (scissors, pliers).

Arms, ashes, barracks, clothes, congratulations, earnings, people, police, surroundings, wages, etc. *The police are looking for the bank robbers*.

Group nouns (army, audience, class, club, committee, company, council, crew, family, government, press, public, team, staff, etc) can take either a singular or a plural verb depending on whether we see the group as a whole or as individuals. The staff of the company works really hard to increase production (staff as a group). The staff were given a bonus at Christmas (each member of the staff separately as individuals).

Note how certain nouns can be used in the singular and plural with a different meaning.

Singular	Plural
Give me a **glass** of water, please.	I've been wearing **glasses** since I was 8 years old.
Has she always had short **hair**?	There are so many **hairs** in the sink!
Have you got any lined **paper** I could use?	He showed his **papers** to the customs officer.
I can't talk now; I have a lot of **work** to do.	A lot of Dali's **works** are on display in this museum.
We had at least 200 **people** at our wedding.	The **peoples** of Ukraine are hoping for change.
The **rain** is falling really heavily now.	The villagers are hoping for the **rains** to come soon.
You need **experience** for this job.	I had a lot of interesting **experiences** visiting Asia.

Practice

1. Underline the correct verb form:

1. Mathematics is/are my favourite subject.
2. Wood come/comes from trees.
3. The news was/were interesting this evening.
4. His advice was/were useful.
5. Your furniture is/are so tasteful.
6. Butter contain/contains a lot of fat.
7. Your hair is/are so shiny.
8. Japanese is/are difficult to learn.
9. Most people is/are worried about the future.

10. Water is/are necessary for survival.

2. Write the correct form of the verbs in brackets:

1. The people of Asia …… (believe) in various religions.
2. 20 years …… (be) a long time to spend in prison for theft.
3. Hathaway Pacific …… (be) an Asian airline.
4. Flu …… (make) you feel miserable.
5. A loaf of bread …… (cost) more now than it did ten years ago.
6. I think olive oil …… (add) a lot of flavour to cooking.
7. My favourite pyjamas …… (be) the ones with red and white stripes.
8. Some people think French …… (sound) so romantic.
9. Physics …… (involve) a lot of theoretical study.
10. Gravity …… (pull) things towards the centre of the Earth.

3. Finish the sentences without changing the meaning of the first sentence:

1. He was given some useful information. ……
2. He bought a new suit for the wedding. ……..
3. You are not allowed to park here. ..……
4. People use sand to make glass. ….…….
5. Nowadays men and women wear trousers. ……

Determiners/Pronouns

***All** refers to more than two people or things. It has a positive meaning and takes a verb in the plural. It is the opposite of **none**. E g. *All the students failed. All of them failed. They all failed. All five of them failed.*

All + that -clause (= the only thing) takes a singular verb. **All that** *he said was not to worry.*

***Both** refers to two people or things. It has a positive meaning and takes a verb in the plural. It is the opposite of **neither/not either**. E g. *Pam and Ann are singers. Both Pam and Ann are singers. They are both singers. Both of them are singers. Both girls are singers.*

***Whole** (=complete**)** is used with countable nouns. We always use a, he, this, my, etc + whole + countable. The whole day = all day.

***Either** (=any of the two)/**Neither** (=not one and not the other) refer to two people or things and are used before singular countable nouns.*e g Neither*

girl enjoys horror films. **Neither of/Either** of take a verb either in the singular or plural. *E g. Neither of them is/are French.*

***None** refers to more than two people or things. It has a negative meaning and isn't followed by a noun. E g. *"Are there any mistakes?" "No, none".* **None of** is used before nouns or object pronouns followed by a verb either in the singular or plural It is the opposite of **all.** E g. *None of the three girls/them know(s) how to do it.*

NOTE!

no +noun There's no room for you.

***Every** is used with singular countable nouns. It refers to a group of people or things and means "all", "everyone", "everything", etc. E. g. *He goes to the gym every day.*

***Each** is used with singular countable nouns. It means "**one by one**", considered individually. E. g. *Each member of the team was given a medal*. Note that **every one** and **each one** have **of** constructions. E. g. *Every one of/Each one of the players is to be given a bonus.*

***One/Ones** are used to avoid repetition of a countable noun. E.g. *"Which dress do you like?" "This one".*

Practice

1. Underline the correct item:

1. Both/Neither Mozart and Beethoven were great composers.
2. Neither/Either Sam or David studied physics at school.
3. I finished the all/whole exercise in five minutes.
4. I've kept in touch with all/every my old school friends.
5. Neither/Either of the girls passed the exam. They both failed.
6. Victor goes to the same restaurant every/all day.
7. None/each of the people he contacted were interested.
8. We have to pay our telephone bill each/every three months.
9. You'll get fat if you eat all/none those biscuits.
10. Either/Both Tom and Lynn had a good time.

2. Fill in: all, both, whole, either, neither, none, every, each or one(s):

1. …… of the toxic waste has been cleared up by the company.
2. He's studying …… politics and modern languages at university.

3. ”I think these are the …… you like”.

4. They spent the …… day packing for their holiday.

5. She spends …… her time studying for her exams.

6. In …… game there is an element of risk.

7. John and Fiona had a lot of work yesterday …… of them went out.

8. “Do you like this skirt?” “I think that …… is more flattering”.

9. The members of the club were …… given copies of the regulations.

10. Both of these dictionaries are excellent …… one of them will help you in your studies.

***Both…and…+plural noun.** Both Ann and Liz are vegans.

***Neither…nor…/Either…or…/Not only…but also…+ singular or plural verb** depending on the subject which follows nor, or, but also. E.g. *Neither Bill nor John is willing to help. Not only Sue but also her family are going to the wedding.*

3. Rewrite the sentences using both … and, neither … nor, either or, not only … but also:

1. Mel is a doctor and so is Bill. *Both Mel and Bill are doctors.*
2. Karen will pick you up from the station or else Miles will. ……....
3. John hasn’t been to Germany and his brother hasn’t either. ……
4. Jo and Jim speak French. ……
5. Paul doesn’t like going to the cinema. Tim doesn’t either. …….

4. Complete the sentences using the words in bold. Use two to five words:

1. My aunt lives on a farm and so does my cousin.
And Both my aunt and my cousin live on a farm.
2. Danny can speak Chinese and so can his brother.
But Not …… brother can speak Chinese.
3. Gordon is a journalist; his wife is too.
Are Both …… journalists.
4. The exhibition will be opened by the mayor or the Queen.
Or Either the …… open the exhibition.
5. Not only Patricia but also her husband want to emigrate.
And Both …… to emigrate.

5. Translate into English:

1. Ви обидва повинні приїхати до нас і провести з нами вечір.
2. Увійшла Настя, несучи в кожній руці по бокалу.
3. Він продовжував дивитись на годинник кожні 5 хвилин.
4. Вони не говорили про те, що турбувало кожного з них.
5. Вона вивчила кожну газету за останній рік.

6. Я хочу чути все, про що вони говорять.
7. Директор поговорив з кожним із нас по черзі.
8. Попросіть їх усіх заповнити анкети.
9. По обидва боки дороги простягнулись нові житлові райони.
10. Ви не боїтесь, що вас неправильно зрозуміють або не дадуть висловитись? – Я не боюся ні цього, ні іншого.

Comparative and superlative adjectives.

Complete the grammar rules using the examples.
Sydney's other famous landmark is a lot **older than** the Opera House.
It cost fifteen times **more than** the original estimate.
It's the biggest, liveliest, and most cosmopolitan city in Australia.
Its Opera House is **as famous as** the Statue of Liberty.
One-syllable adjectives
*to make the comparative adjective, add *–er* to the end of the adjective.
*To make the superlative adjective, add-*es t* to the end of the adjective
Two-syllable adjectives ending in-*y*
*To make the comparative, change the -*y* to *–i* and add – *er* to the end of the adjective
*To make the superlative, change the –y to –i and add … to the end of the adjective.
Other two-syllable adjectives and three-syllable adjectives.
*To make the comparative, put *more* before the adjective.
*To make the superlative, put…… before the adjective.

Comparisons

*To compare different things**,** use the comparative adjective and add *than.*

Practice

1. Complete the table with the appropriate forms of the adjectives:

Adjective	*Comparative Regular*	*Superlative*
big	bigger	the …
……...	fewer	the fewest
large	larger	……
near	nearer	……
old	……	……
healthy	……	the healthiest
lively	livelier	……
lovely	lovelier	……
developed	more developed	the ……..
enjoyable	…….	the most enjoyable
exciting	more exciting	……
impressive	the most impressive	……

	Irregular	
good	better	the …...
much/many	……	the most
little	……	the least

2. Complete the descriptions. Use the comparative or superlative form of the adjective:

South of Sydney, Bondi is the …….. (easy) beach to reach. It has the …..… (wide) range of facilities, but at weekends it's …… (crowded) and …….. (noisy) than the other beaches. South of Bondi, Tamarama is one of Sydney's …… (beautiful) beaches, but also one of the …… (dangerous) for swimming. For children, Cooge Beach is both …… (safe) and …… (suitable) than Tamarama.

There are several beaches north of Sydney. Manly is the …… (accessible) and the …… (good) for surfing. Palm Beach is …… (far) from Sydney than Manly, and it takes …… (long) to get to, so it's not surprising that it's …… (peaceful) than the others.

3. Work in pairs. Compare Australia, Canada, and the USA, using the facts in the table. Use the comparative or superlative form of the adjective in the box:

Example: Washington has a lower population than Ottawa.

big high low many small

	Australia	**Canada**	**USA**
Area (sq.km)	7.6 million	9.9 million	9.3 million
Population	17.3 million	26.8million	252.0 million
Population of the capital	250,000	819,263	606,900
	(Canberra)	(Ottawa)	(Washinon DC)

4. Think of a city you know well. Describe it to your class but don't give the name. Compare it to Sydney. The class must try to guess the city.

Unit 3

Present Tenses. Present Simple. Frequency adverbs. Present Continuous Tense. Present Perfect Tense. Present Perfect Continuous Tense.

Present Simple

Form:

I/ you/ we they **work** **Do** I / you/ we/ they **work?**
He/ she/ it **works** **Does** he / she/ it **work?**
I/ you/ we/ they/ do not work.
He/ she/ it does not work.

Uses:

1. Presenting factual information, e.g. about company activity

Our company **employs** over 100,000 people, **operates** in many overseas markets, and **offers** a wide-range of hi-tech products for the 21st century.

2. Actions and situations which are generally true

High taxation **discourages** investment.
We **sell** our products into many markets.
British wines usually **have** a sweet taste.
Competition **brings out** the best in products and the worst in people.

3. Verbs used only in the present simple

There are a number of verbs which are almost always used in the present simple and not with – *ing*. These verbs usually refer to:

Mental states: believe, doubt, forget, imagine, know, realise, recognise, regret, remember, suppose, think, understand

Likes and dislikes: admire, dislike, hate, like, love, want, wish

Possession: belong to, contain, have, include, own, possess

Appearance: appear, look like, resemble, seem

Being: be, consist of, depend, exist

Perception: hear, see, smell, taste

4. Saying how often you or other people do things

We usually use the present simple with frequency adverbs:
I **never** smoke at work.
He plays golf **every Sunday** morning.
When she gets to the office she **always** checks her e-mail first.

5. Asking for and giving directions and instructions

"How do I **get** to your office?"

"You **turn** left after the station, **cross** the bridge and it's the second building on the right".

6. Talking about timetables and scheduled events

The bus **leaves** at 8.35 tomorrow morning.

The exhibition **opens** on 25 January.

The legislation **comes into force** on 1 January.

These are seen as fixed and the speaker is unlikely to be able to influence them.

7. Providing a summary or abstract at the beginning of a report

The first section of this report **provides** introductory comments, **focuses** on important developments and **highlights** some of our operations outside the United States. The second section **analyses** the results for the group as a whole. The final two sections **address** our consolidated cash flows and financial condition. The report **concludes** by pointing out the need for further investment if the group is to continue its expansion policy.

8. Newspaper headlines

9. Doing by saying

We use the present simple with certain verbs which say what their function is. When we say them we "perform" the action. For example, "I romise to meet you at the airport" is making a promise. Other examples include:

I **resign**! I **apologise**.

I **declare** this meeting open. I **demand** to see the manager.

I **admit** I was wrong. I **advise** you to look again at our proposal.

Practice

1. Complete the sentences using the correct form of the verbs in brackets:

1. The earth (to go) round the sun.
2. In Britain most of the shops (to close) at 5.30.
3. In summer Tom (to play) tennis twice a week.
4. In the morning Mr. Smith (to wake up, to wash, to have his breakfast, to go to work).
5. Maize (not to grow) in Britain.
6. Renaissance (to mean) "revival".
7. The train to London (to leave) at eight, (not it)?
8. You (to be) busy?

2. Ask questions to the following sentences beginning with the words in brackets:

1. Ann watches TV. (How often?)
2. Fred manages to cope with any problem. (How?)
3. It is his problem, not mine. (Whose?)
4. Steve's friends come to our place regularly. (How often?)
5. People do stupid things. (Why?)

3. Fill in: where, whose, who, which, why

Tenerife is a Spanish island 1) …..… is off the coast of North Africa. Having visited many islands 2) …… the nightlife is not very lively, I was thrilled when I saw so many restaurants, cafes and discos in Tenerife. It is a tunning island 3) …… beauty captivates all those 4) …… go there; this is the reason 5) …..…. many people visit the island year after year.

4. Pay attention to the forms of the third person singular of the verbs in the Present Simple in the following proverbs and sayings. Give their Russian equivalents:

1. Laughter is the best medicine.
2. Nothing flies into the mouth of a sleeping fox.
3. He who laughs last laughs longest.
4. Silence gives consent.
5. All is well that ends well.

5. Fill in the blank spaces of the following proverbs and sayings:

1. Actions …… louder than words (to speak).
2. Still tongue …… a wise head (to make).
3. Birds of a feather …… together (to flock).
4. A watched pot never …… (to boil).
5. All work and no play …… . Jack a dull boy (to make).

6. The following sentences all refer to the present. Put the verbs in brackets into the correct tense, Continuous or Simple Present:

1. You (see) the house on the corner? That is where I was born.
2. You (listen) to what I am saying? You (understand) me?
3. I (notice) Mary (wear) a new dress today.
4. She (not understand) what you mean.
5. You (smell) gas? I (think) the new stove is leaking.
6. John (seem) rather tired today.

7. It still (rain), but it (look) as if it will soon stop.

8. Ask him what he (want).

9. After what has happened, you really (mean) to say that you still (believe) him?

10. You see this box? It (contain) matches.

7. Work in pairs:

Find out if your group-mate likes music.

Do you like music? (You like music, don't you?)

Yes, I do. And what about you?

So do I./But I don't.

Find out if your group-mate:

1. Lives in hostel; lives far from the University; gets to the University by bus or by underground; returns home late; is usually tired.

2. Has a large family; lives with his/her family; spends much time with his/her relatives.

3. Find out the time of his/her getting up; having breakfast; leaving home; coming to the University; returning home.

8. Translate into English:

1. Його батьки живуть у Києві, і він їздить до них щомісяця.

2. Я не знаю, чому він завжди запізнюється.

3. Хіба ви не хочете піти з нами на дискотеку?

4. Наш поїзд вирушає о 18.00. У нас ще є час.

5. Я розумію практично все, що говорять в англійських фільмах.

6. Чим ви зазвичай заробляєте собі на життя?

7. Перед заходом сонця вітер завжди посилюється.

8. Його матір не знає, що з ним робити. Він постійно каже неправду.

9. Вони сподіваються заробити багато грошей на цьому проекті.

10. Майже завжди ми проводимо канікули на морі, але цього року ми вирішили поїхати в гори.

Frequency adverbs

0 % never rarely sometimes often usually always 100 %

Read these examples and complete the grammar rule.

I'm always very busy. They never visit us. We usually drive to work. He isn't usually late. I don't always get up early. They're never on

time.

*We write words like always/usually/never after the verb to be but ….. other verbs.

Practice

1. Rewrite the sentences adding frequency adverbs to make true sentences. Add three more sentences about your daily routine:

1. I get up before 6 a.m.
2. My teacher goes to bed after midnight.
3. I drive to work.
4. I am late.
5. My friend uses a computer.
6. I speak English to friends.
7. My parents travel on business.
8. We are early for English class.

Present Continuous (Progressive) Tense

Form

I am working	**Am I working?**
You/ we/ they **are working**	**Are** you/ we/ they **working?**
He/ she/ it **is working**	**Is** he/ she/ it **working?**
I **am not** working	
You/ we/ they **are not working.**	
He/ she/ it **is not working.**	

Uses

1. Talking about an event in progress at the moment of speaking.

"What **are you doing?**" "**I'm trying** to find a file".

"I'm afraid Mr. Daniels can't see you right now. **He's interviewing someone".**

We also use the continuous with verbs of movement when the action has just started:

"**I'm leaving**. Can you tell Mary I'll see her tomorrow?"

"Can I speak to John?" " Sorry, he's out. No, hold on, **he's just coming** down the corridor".

2. Describing current situations and ongoing projects.

The time reference is at and around "now", before and after the situations referred to. But the situation may not be in progress literally at the exact moment of speaking.

e.g. **We're waiting** for permission to go ahead with the project.

3. Describing temporary situations

When the present continuous is used in this way, the situation described will not last permanently.

They're staying at the Hilton Hotel until the end of the week.

They **are offering** a 20 % discount for the duration of the trade fair.

4. Changing, developing situations

We use present continuous to describe changes which have not yet finished.

The number of people using the Internet **is growing.**

The Amazon rainforest **is disappearing** at an alarming rate.

5. Personal arrangements and plans

We use the present continuous to refer to future time when talking about arrangements and fixed plans made before the time of speaking. We often use a time expression unless we are sure that the other person knows we are talking about the future:

I'm seeing Mr. Brown next week.

I'm taking the client to the best restaurant in town.

She's got a new job so **she's leaving** the firm in October.

We also use the present continuous with verbs of movement to talk about actions which are just beginning:

It's 10 o'clock. **I'm going** to the canteen for lunch. **Are** you **coming**?

6. Talking about repeated actions

His daughter **is taking** driving lessons.

His wife **is** always **telling** him not to work so hard.

If we describe repeated situations using the present continuous with *always*, the situation is often unplanned. Compare:

I always **meet** her in the car park (planned in advance).

I'm always **meeting** her in the car park (by chance).

Practice

1. Fill in with Present Simple or Continuous:

1. A: I …… (see) there's a great film on at the cinema tonight. Would you like to go?

B: No, I …… (see) the dentist about my toothache.

2. A: I …… (think) about going on a picnic this afternoon.

B: I wouldn't bother. I …… (think) it's going to rain.

3. A: Is John feeling OK? He …… (look) very red in the face.

B: Yes, I know. I …… (look) for the doctor's telephone number now.

4. **A:** How …… (you/like) you stay in Budapest?
B: I am really enjoying myself. I particularly …… (like) the Hungarian food.
5. A: …… (you/have) a car?
B: Yes, but I …… (have) some problems with it, so it's at the garage.

2. Translate into English:

1. Я бачу, у тебе труднощі з цим комп'ютером. Я можу чим-небудь допомогти?
2. Він розуміє правило, але все ще робить помилки.
3. Дивись! Починається дощ!
4. Вибачте, я шукаю пошту. Чи є тут поблизу пошта?
5. Я знаю, що ти не любиш ходити по магазинах.
6. Ми звичайно снідаємо о сьомій годині.
7. Вода завжди замерзає, якщо надворі нуль градусів за Цельсієм.
8. Звичайно автобуси їздять цією вулицею, але сьогодні тут ремонт, і автобуси не їздять.
9. Чому ти запізнився сьогодні? Ти ж звичайно не запізнюєшся по понеділках.
10. Петро вивчає зараз медицину. Він сподівається знайти роботу за кордоном після закінчення університету.

3. The following sentences all refer to the present. Put the verbs in brackets into the correct tense, Continuous or Simple Present:

1. You (see) the house on the corner? That is where I was born.
2. You (listen) to what I am saying? You (understand) me?
3. I (notice) Mary (wear) a new hat today.
4. She (not understand) what you (mean).
5. You (smell) gas? I (think) the new stove is leaking.
6. John (seem) rather tired today.
7. It still (rain), but it (look) as if it will soon stop.
8. You (mind) helping me a moment? I (try) to mend this table.
9. Ask him what he (want).
10. The train still (stand) in the station. You (think) we can just catch it?

4. Which of these ideas do you associate with the present simple (PS) and which with the present continuous (PC)?

1.regular activities…..... 6. permanent and factual situations….....

2.temporary situations…. 7. a present arrangement for the future…….....…

3.fixed timetables…..... 8.mental states……

4.giving instructions…..... 9. trends and changing situations…….....….

5. an event in progress….. 10. doing by saying……

Study these sentences and decide which example corresponds to each 1-10 above.

1. I'm replacing Bill because he's off sick.
2. The scheduled flight leaves next Monday at 8.15 from JFK.
3. The technician is mending the photocopier so you can't use it right now.
4. I'm seeing Bill tomorrow afternoon, I've got it in my diary.
5. The conference room measures 150 square metres.
6. I admit there has been a mistake.
7. I understand they have gone bankrupt.
8. Enter PIN number, select menu, choose language, press OK.
9. With the Internet the world is getting smaller.
10. We have a planning meeting once a month.

5. Put the verbs in brackets into the correct present forms:

Alan is flying to Barcelona tonight. He …… (already/pack) his suitcase but he …….... (not/call) a taxi yet. His plane …… (leave) at 8 p.m.

Ann and Sally …… (be) flat-mates. They sometimes …… (argue) because Sally ……. (always/make) a mess in the kitchen.

"Look over there! It's John". " Oh, yes! But he …… (look) so different! He …… (put on) at least 15 kilos".

Ever since the accident she …… (be) afraid to drive. Next week she …… (see) a psychologist who …… (specialise) in that sort of problem.

"What on earth …… (you/do)?" Your clothes are all dirty!" "Well, I …… (work) in the garden all day. Look! I …… (already/plant) a lot of flowers. I …… (plan) to cut the grass now".

NOTE!

The Present Continuous Tense is also frequently used with future meaning. In this case it is associated with adverbs of future time:

Soon, this evening, tomorrow, next week, tonight, in a few minutes, next summer, later this year (month, week).

He intends to go to the cinema this evening = He is going to the cinema this evening.

6. Change these sentences in the same way into the form with the Present Continuous Tense:

1. The Jones family plan to go to Italy this summer.
2. Do you want to go to the concert tonight?
3. John plans to sell his car this week and to buy a new one.
4. I must leave immediately, I hope to catch a bus in a few minutes.
5. Please wait a moment! I promise to come soon.
6. Come and say goodbye. Our guests have to leave in a minute.
7. I'm sorry I can't come. I plan to shop all morning and have lunch in town.
8. We mean to visit our friends in London and spend the night with them.
9. That new Italian film is booked to come to the Odeon Cinema shortly.
10. Goodbye! I've arranged to play tennis in half an hour.

Present Perfect Simple and Present Perfect Continuous
Present Perfect Simple

Use

	Example
1. Finished experiences in your life up to now	Have you ever been to the USA? She's lived in China and Japan.
2. Recent situations and actions in a time up to now	We've reduced the prices. Have you had a holiday this year?
3. Situations that started in the past and still continue	He's been an architect since 1992. How long have you known her?
4. Past actions in a time up to now where we give the quantity	She has designed a lot of fashion items for this firm. How many tests have you done?

Present Perfect Continuous

Use

	Examples
1. Actions that began in the past and continue to the present.	We've been producing pens since the 1980s. He's been living here for five years.
2. Actions that began in the past and have just stopped.	You look very tired. Have you been working? I'm hot because I've been running.

*The Present Perfect Continuous and Simple are similar in meaning. The form we use often depends on whether we are more interested in the action or its result.

e.g. I've been fixing the car (My hands are dirty).
e.g. I've fixed the car (Now I can drive to work).
*We use the Present Perfect Continuous to say *how long*
e.g. They have been interviewing people since 10 a.m.
She's been writing letters all morning.
We use the Present Perfect Simple to say *how many*
e.g. They have interviewed nine people.
She has written five letters.

For and since

We use **for** with the period of time we use **since** with a point in time

For	**three days**	**since**	**Tuesday**
	five hours		8 August
	a month		4 o'clock
	ten minutes		last summer
	a long time		1995
	ages		I last saw you

Practice

1. Underline the correct verb form:

1. Susan is working/has been working as a designer since 1982.

2. She has made/has been making three business trips to Kyiv this month.

3. Recently she designs/has been designing handbags for Italian companies.

4. She has travelled/has been travelling to the UK many times since 1999.

5. She has made/has been making a lot of contacts in the fashion industry since 1982.

2. Complete this fashion magazine article by choosing the Past Simple, Present Perfect Continuous or Present Perfect Simple form of the verb in brackets:

Fashion fortunes

Since the 1970s, designers like Giorgio Armani, Ralph Lauren, and Calvin Klein …… (be) enormously successful. Their companies …… (grow) for more than twenty years and they …… (become) rich world businessmen. The fashion businesses of French designers like Pierre Cardin and Louise Feraud …… (make) even bigger fortunes. Armani, one of Italy's most successful designers, …… (start) his company in 1975 with an investment of $10,000. Since then, his company's turnover …… (increase) steadily, and in recent years it …… (grow) to $ 1 billion.

3. Translate into English:

1. Ми познайомились місяць тому, але з тих пір я нічого про нього не чула.

2. Я ще не розмовляв з ним про це. Я ще його не бачив.

3. Ви коли-небудь були в Австралії?Ні, але я завжди мріяла там побувати.

4. Ви вже скуштували цей пиріг?

5. Дякую вам за все, що ви зробили для мене.

6. Ми були раді побачити твою сестру, ми не бачили її з минулого року. Вона дуже змінилась.

7. Ми надіслали йому листа, але відповіді ще не одержали.

8. Коли ви востаннє були в Криму? – Я взагалі ніколи не був у Криму.

9. Дощ перестав, і знову засяяло сонце.

10. Він зателефонував мені, щойно я прийшла додому.

4. Fill in "has/have been to/in", "has/have gone to":

1. Bertha's not here. She has gone to the library.

2. I …… Madrid, but I only spent a few days there.

3. "How long …… you …… Birmingham?" "For nearly two years".

4. Tom is alone because his parents …… the seaside for the weekend.

5. Julia …… the supermarket – she'll be back in about an hour.

5. Fill in "since" and "for":

Sue Wilson has been involved in sports 1) for more than 25 years. Her first interest was gymnastics, which she has been actively involved in 2) …… she was ten, but she has also been interested in other forms of sport 3) …… many years. She has been a keen cyclist 4) …… 1980, when she made her first bicycle tour of Europe, and 5) …… her marriage to all-round sportsman Tom Wilson in 1985, she has tried her hand at climbing, sailing and skydiving. Her talent as a writer has kept her busy 6) …… the past ten years, and she has become familiar to TV viewers as a sports commentator 7) …… her first TV appearance in 1988. Her plans for the future? " I've been interested in the role of women in sports ever 8) …… I was a teenager. Now, after being so busy 9) …… all these years, I've decided to take some time off so I can write a book about it." Since Sue has been part of the sporting world 10) ……..… so long, her book should be fascinating.

Unit 4

Past Tenses. Past Simple. Past Continuous. Past Perfect. Past Perfect Continuous

Past Simple

Form

I/ you/he/ she/ it/ we/ they **worked**	I/he/she/it **was** late
I/ you/he/ she/it/we/they/**did not work**	You/ we/ they **were late**
Did I/ you/he/she/it/ we/ they **work**?	**Was** I/ he/ she/ it **late**?
Were you/ we/ they late?	

Uses

1. Talking about completed actions that happened in the past.

Alexander Graham Bell **invented** the telephone.

"**Did** you read the contract?" "Yes, and I **sent** it back to the legal department".

2. Referring to a definite moment or period in the past.

I met the president **yesterday.**

I spoke to them **an hour ago**.

Ted Turner launched CNN **in 1980**.

The standard of living in Europe went up **during the 1960s**.

3. Describing something, e.g. the history of a company.

When George Eastman introduced the first Kodak camera in 1888, he wanted to supply the tools of photography at the lowest possible price to the greatest number of people. The rapid growth of his business made large-scale production a necessity. The creation of ingenious tools and processes for manufacturing film enabled the Eastman company to turn out high-quality merchandise at prices that put them within the reach of the general public.

4. In reports, e.g. a company's annual report.

We use the past simple in annual reports when they refer back to the previous year's trading.

Last year **was** a tough year for our group. On the one hand, we **earned** more than a billion dollars, we **generated** record cash flow. On the other hand, our total earnings **declined**.

Past Continuous (Progressive)

Form

I **was working**.	**Was I working?**
You/ we/ they **were working.**	**Were** you/we/they **working?**
He/she/it **was working.**	**Was** he/she/it **working?**

I **was not working.**
You/we/they **were not working**.
He/she/it **was not working.**

Uses

1. Emphasising the duration of a past event

He was working on the report all day long.

During the 1990s computer scientists were trying to deal with the millennium bug.

2. Describing a background event

We use the past progressive to describe an event which was in progress when it was interrupted by another one. The second, shorter event, is in the past simple:

I was just leaving the office when he arrived.

We were talking about safety procedures when the fire alarm went off.

3. For repeated events

He was visiting clients all last week and didn't come into the office (a number of different clients).

Last month we were having a lot of problems with the production line (a number of different problems).

However, the past progressive is not normally used for the same action which is repeated, or for habitual past actions:

The production line **stopped** five times yesterday.

When I was at business school we often **worked** on case studies.

4. Making polite requests

I was wondering if you could give me a lift downtown.

There is no idea of past time here. The past verb form is a polite formula and makes the request less direct.

5. For events planned in the past which did not take place

I was planning to visit the exhibition but I went to the football match instead.

She was going to phone them yesterday but didn't have the time.

Practice

1. Write the Past Simple of the following verbs:

1. open…	4. plan…	7. like…	10. carry…	13. try…
2. prefer…	5. hate…	8. stop…	11. regret…	14. die…
3. love…	6. close…	9. travel	12. enjoy…	15. count…

2. What made these people famous? Write true sentences, and change the form of the verb:

Example: *John Logie Baird gave the first public demonstration of television in 1926.*

1. John Logie Baird	invent	the first flight in 1903.
2. The Wright brothers	discover	radium in 1902.
3. Neil Armstrong	make	the first commercial sewing machine in 1851.

4. Pierre and Marie Curie	patent	the first public demonstra tion of television in 1926.
5. Gutenberg	give	the printing press in 1434.
6. Isaac Singer	land	on the surface of the moon in 1969.

3. Past Simple quick test. How many words can you put in the list below?

Infinitive	come	find	meet	see	think		
Past Simple	ate	did	flew	found	had	said	spent

4. Read the interview. Complete the conversation. Use the Past Simple form of the verbs in brackets:

Interviewer: So, Doctor Green, you came (come) to London for a medical congress and for a holiday…

Dr. Green: Yes, that's right.

I: How many days did you spend (spend) in the UK?

D: Eight days. The congress …… (last) three days and after that I …… (stay) with friends.

I: Where …… you …… (stay)?

D: In a hotel for the congress, and then my friends …… (invite) me to stay in their London flat.

I: ….…. you …… (go) to any museums or art galleries in London?

D: Yes, I did. I …… (spend) 2 hours in the British Museum and the National Gallery, but I …… (not visit) the Tate Gallery.

I: And what …… you …… (do) in the evenings?

D: My friends and I …… (see) the musical *Cats*, and we …… (eat) in some very good restaurants, but I …… (not have) time to go to the theatre or the opera.

I: …… you …… (visit) any places outside London?

D: Yes. We …… (go) to Bath and …… (visit) the Roman Baths and …… (take) photos of Bath's famous architecture.

5. Complete the postcard using the Past Simple form of the verbs in the box below:

Come, have, meet, visit, walk, tour, do, spend, rent, see, understand

Dear Louise,

Greetings from Scotland! We …… to Scotland ten days ago and …… a day in Edinburgh. We …… some sightseeing there and …… the Castle, then we …… a car and …… the Scottish Highlands. We …… in the mountains and …… some beautiful places, and ……

dozens of friendly local people. Sometimes we …… their Scottish accent! …… you …… a good holiday last month?

Love,

Anna and Max

6. Translate into English:

1. Вона підняла трубку і набрала номер телефону Аліси.
2. Коли вони поїхали? - Не знаю. Мене не було вдома.
3. Він повернувся позавчора, так?
4. Він поклав книжки на стіл, вимкнув світло і вийшов з кімнати.
5. Її сім'я переїхала до Канади минулого року.
6. Коли я ходив його відвідати, його не було вдома.
7. Давні єгиптяни будували піраміди для поховання своїх царів.
8. Людина винайшла колесо приблизно десять тисяч років тому.
9. Лікар працював 15 годин без перерви, і був дуже стомлений.
10. Різдво традиційно було часом, коли люди намагалися підбадьорити себе протягом холодних зимових місяців.

7. Put the verbs in brackets into the correct past forms:

Last year, Tom and Fiona …… (decide) to buy a house. They …… (save up) for ages, and by the end of May they …… (put by) enough for the deposit on a house. They …… (live) in a tiny flat at the time and Fiona …… (insist) that she …… (want) a house with a big garden. They …… (search) for only a few days when they found exactly what they …… (look for) – a two-bedroom house in nearly an acre of garden. Unfortunately the owner …… (ask) much more than they …… (be) willing to pay, and when they …… (look) more closely at the interior, they …… (see) that whoever …… (live) there before, …… (make) an absolute mess of the walls and floors. Still, Fiona …… (like) the garden and the location so much that she …… (manage) to convince Tom that, despite the price, it …… (be) the perfect house for them.

8. Put the verbs in brackets into the correct past forms:

Last summer some friends and I …… (arrange) to go camping. We …… (look) forward to going for weeks when finally the date of departure …… (arrive). We …… (load) the car with our luggage and …… (set off) early in the morning. The weather was perfect, the sun …… (shine) brightly and the wind …… (blow) gently. There …… (not/be) a cloud in the sky! Shortly afterwards, while we …… (travel) along the motorway, we …… (notice) that the car …… (make) a strange noise. Pete, who …… (drive) very fast, suddenly …… (stop) the car. Everyone …… (get out)

and …… (go) round to the back of the car. To our surprise the boot was wide open – whoever …… (load) the luggage …… (not/close) it properly, and everything …… (fall out)!

9. Put the verbs in brackets into the correct past forms:

Christopher Columbus …… (be/born) in Italy in 1451. He …… (work) as a woollen cloth weaver with his father before he …… (begin) his nautical career at the age of 22. After several merchant voyages he …… (settle) in Lisbon, Portugal in 1478. By this time he …… (teach) himself Portuguese and Latin and ……. (read) many geographical and navigational books. In 1481 he ……. (marry) Felipa Parestrell. They …… (have) one son, Diego. They …… (be/married) for two years when his wife …… (die). At this time he …… (work) for John II of Portugal. Columbus …… (always/wish) to sail around the world westward but John II wouldn't agree. Finally King Ferdinand and Queen Isabella of Spain …… (decide) to finance the voyage. He …… (set off) for the first time in April 1492. There …… (be) three ships: the Nina, the Pinta and the Santa Maria and a crew of 90 men. They …… (have) many false alarms before they finally ……. (spot) the "New World" at 02.00 on Friday the 12th of October, 1492. Columbus …… (make) another three voyages after this. He …… (retire) to Valladolid 12 years after his first voyage and in 1517 he …… (die) there.

10. Translate the following sentences into English using appropriate idiomatic phrases. Take care to use the Present or Past Continuous tense. Consult the reference list below:

1. Йому вже сімдесят, але роки не владні над ним.
2. Ви напрошуєтесь на неприємності, як би не довелось потім шкодувати.
3. А вам не спадало на думку, що ви лаєте не того?
4. Її справи йшли добре, і вона була дуже збентежена, коли дізналася, що ситуація погіршується.
5. У кінці роману лиходій отримує по заслугах, і його запроторюють у тюрму.
6. Мені дуже хочеться подивитися цей фільм, але так і не трапилася нагода.
7. Моя сестра так захопилась своїм експериментом, що не знає, у якому вона світі живе.

(be dying to; get what's coming to one; be going strong; be barking up the wrong tree; not know if one is coming or going; be looking for trouble; the mercury is falling; be sitting pretty).

Past Perfect

Form

I **had worked**.	**Had I worked**?
You/ we/ they **had worked**.	**Had** you/we/they **worked**?
He/she/it **had worked**.	**Had** he/she/it **worked**?

I had **not worked**.
You/we/they **had not worked**.
He/she/it **had not worked**.

Uses

1. For a past action which occurred before another action or before a stated past time:

By his second day at camp he *had made* several friends.
She *had* already *left* when I got home.
She *had arrived* by 8 o'clock.

2. For a complete past action which had visible results in the past:

She felt much safer after she *had locked* all the doors.
She *had cleaned* the house by 6 o'clock and then she could have a rest.

3. As the past equivalent of Present Perfect:

The room was empty – everyone *had gone* out. (Present Perfect: The room is empty – everyone has gone out.)

She wasn't in her office. She *had* already *left*. (Present Perfect: She isn't in her office. She has already left.)

4. Time expressions used with Past Perfect:

for, since, already, after, before, just, never, yet, by, by the time etc.

Past Perfect Continuous

Form

I **had been working**	**Had** I **been working**?
You/ we/ they **had been working**	**Had** you/we/they **been working**?
He/she/it **had been working**	**Had** he/she/it **been working**?

I **had not been working**
You/we/they **had not been working**
He/she/it **had not been working**

Uses

1. For an action continuing over a period up to a specific time in the past:

She *had been saving* for a whole year before she bought her ticket to Australia.

He *had been waiting* for an hour before she arrived.

2. For a continuous, past action which had visible results or effect in the past:

He *had been shouting* so loudly that he had a sore throat.

He was tired. He *had been cleaning* the house all morning.

3. As the past equivalent of Present Perfect Continuous:

The party was a great success because he *had been preparing* for it all week. (Present Perfect Continuous: The party is a great success because he has been preparing for it all week.)

He was tired. He had been working hard all morning. (Present Perfect Continuous: He is tired. He has been working hard all morning.)

4. Time expressions used with Past Perfect Continuous:

for, since

Practice

1. Fill in the Past Perfect or Past Perfect Continuous:

1. Her feet ached last Monday. She …… (walk) for six hours.
2. Don was cold. He …… (swim) in the lake.
3. He couldn't pay the bill. He …… (lose) his wallet.
4. He bought a car after he …… (save) enough money.
5. She signed the letter after she …… (write) it.
6. Her hair was wet. She …… (wash) it.
7. He felt sick because he …… (eat) too much.
8. He was hot. He …… (run) for an hour.

2. Complete these sentences using the verbs in brackets in Past Perfect:

1. Most of my friends were no longer there. They …… (leave).
2. My best friend, Kevin, was no longer there. He …… (go) away.
3. The local cinema was no longer open. It …… (close) down.
4. Mr. Johnson was no longer alive. He …… (die).

5. I didn't recognise Mrs. Johnson. She …… (change) a lot.

6. Bill no longer had his car. He …… (sell) it.

7. Mr. and Mrs. Davis were in an aeroplane. They were very nervous as the plane took off because they never …… (fly) before.

8. The woman was a complete stranger to me. I never …… (see) before.

9. Margaret was late for work. Her boss was very surprised. She never …… (be/late) before.

10. Jane played tennis yesterday – at least she tried to play tennis. She wasn't very good at it because she never …… (play) before.

11. It was Keith's first driving lesson. He was very nervous and did not know what to do. He never …… (drive) before.

12. When I arrived at the station, the train …… (leave).

13. We lit the candles because the lights …… (go off).

14. When I got home I discovered that somebody …… (break into) my flat.

3. Join the sentences using the words in brackets:

1. She cleaned the house. Then, she watched TV. (after)

2. I found a solution to my problem. Then, I felt happier. (when)

3. The boys finished their homework. Then, they went out to play. (before)

4. He locked the door. Then, the phone rang. (after)

5. Sarah washed the dishes. Then, her husband arrived. (by the time)

6. The concert finished. Then, the fans left the stadium. (when)

7. They play started. Then, Henry arrived at the theatre. (already … when)

4. Put the verbs in brackets into the correct form of the Past Perfect:

1. Jason …… (return) home before the storm broke out.

2. Lucy …… (pack) her suitcase by the time you called her?

3. The children …… (finish) doing their homework by nine o'clock.

4. Julie …… (type) the letters by the time her boss came to the office?

5. I …… (not/finish) my lunch when uncle Bill came.

6. After Sarah …… (do) the shopping, she had coffee with her friends at a café.

7. When I got to the garage, the mechanic …… (not/repair) my car.

8. The boys were frightened because they …… (not/be) on a plane before.

5. Put the verbs in brackets into the correct form of the Past Perfect Continuous:

1. Sophie …… (paint) the walls all day before she finished them.
2. You …… (wait) long when the boss announced that he couldn't see you?
3. Tom …… (look) for a job for six months when he found one.
4. We …… (watch) TV for half an hour when the doorbell rang.
5. They …… (sunbathe) for an hour when it started to rain.
6. Stan …… (work) as a postman for forty years when he retired.
7. I …… (live) in France for ten years when I met my husband.
8. The two boys came into the house. One had a black eye and the other had a cut lip. They …… (fight).
9. Tom was watching television. He was feeling very tired. He …… (study) hard all day.
10. Tom was leaning against the wall, out of breath. He …… (run).
11. We …… (walk) along the road for about 20 minutes when a car stopped and the driver offered us a lift.
12. When I arrived, everyone was sitting round the table and talking. Their mouths were empty but their stomachs were full. They …… (eat).
13. When I arrived, Ann was waiting for me. She was rather annoyed with me because I was late and she …… (wait) for a very long time.

6. Put the verbs in brackets into the Past Simple, Past Perfect or Past Continuous:

1. **A:** Where 1) …… (be) you last night?

B: I 2) …… (be) at the cinema. I 3) …… (watch) a great film when a fire 4) …… (break out).

A: Oh gosh! How it 5) …… (happen)?

B: Someone 6) …… (drop) a match into a waste-paper basket.

2. **A:** 1) You …… (go) to the beach on Saturday?

B: No, I 2) …… (go) on Sunday instead.

A: You 3) …… (have) a good time?

B: No, I didn't. I 4) …… (sunbathe) when it 5) …… (start) raining, so I 6) …… (leave) in a hurry.

3. **A:** I 1) …… (lose) my keys yesterday.

B: Where you 2) …… (lose) them?

A: I don't know. I 3) …… (go) shopping and when I got back, I 4) …… (realise) that I 5) …… (leave) my keys somewhere.

7. Put the verbs in brackets into the correct past forms:

Last year, Tom and Fiona 1) …… (decide) to buy a house. They 2) …… (save up) for ages, and by the end of May they 3) …… (put by) enough for the deposit on a house. They 4) …… (live) in a tiny flat at the time and Fiona 5) …… (insist) that she 6) …… (want) a house with a big garden. They 7) …… (search) for only a few days when they found exactly what they 8) …… (look for) – a two bedroomed house in nearly an acre of garden. Unfortunately the owner 9) …… (ask) much more than they 10) …… (be) willing to pay, and when they 11) …… (look) more closely at the interior, they 12) …… that whoever 13) …… (live) there before, 14) …… (make) an absolute mess of the walls and floors. Still, Fiona 15) …… (like) the garden and the location so much that she 16) …… (manage) to convince Tom that, despite the price, it 17) …… (be) the perfect house for them.

8. Fill in the gaps with one of the verbs from the list in the Past Perfect Continuous:

play, work, walk, wait, discuss, sit

1. She was wet. She …… in the rain.
2. They were happy. They …… together for hours.
3. He was irritated. He …… for the bus for half an hour.
4. He was hot. He …… in the barn.
5. She was sunbathed. She …… in the sun for hours.
6. They were tired. They …… business problems for four hours.

9. Put the verbs in brackets into the correct past forms:

Last summer some friends and I 1) …… (arrange) to go camping. We 2) …… (look) forward to going for weeks when finally the date of departure 3) …… (arrive). We 4) …… (load) the car with our luggage and 5) …… (set off) early in the morning. The weather was perfect, the sun 6) …… (shine) brightly and the wind 7) …… (blow) gently. There 8) …… (not/be) a cloud in the sky! Shortly afterwards, while we 9) …… (travel) along the motorway, we 10) …… notice that the car 11) …… (make) a strange noise. Pete, who 12) …… (drive) very fast, suddenly 13) …… (stop) the car. Everyone 14) …… (get out) and 15) …… (go) round to the back of the car. To our surprise the boot was wide open –

whoever 16) …… (load) the luggage 17) …… (not/close) it properly, and everything 18) …… (fall out).

10. Put the verbs in brackets into the Past Perfect or the Past Perfect Continuous:

1. **A:** Are you all right? You look tired.

B: Yes, I am. I didn't sleep very well. I just 1) …… (go) to sleep last night when a lot of noise outside woke me up. I got up and went to the window. I 2) …… (stand) there for a few minutes when two police cars stopped outside my house. I went downstairs and a policeman told me that two prisoners 3) …… (escape) from prison and were hiding in the area.

A: Did they catch them again?

B: Yes, but I didn't sleep very well after that.

2. **A:** Did you do anything exciting at the weekend?

B: Not really. By the time I 1) …… (do) my shopping and cleaned the house, Saturday was nearly over. What about you?

A: Well, I 2) …… (plan) to go out with my friend but she was late and I 3) …… (wait) for nearly two hours before she phoned me to say she couldn't come after all.

B: That's a shame. Next weekend, we should go somewhere nice together.

11. Put the verbs in brackets into the Past Perfect or the Past Perfect Continuous:

Yesterday was a bad day for Andrew. He 1) …… (not/sleep) well because there was a terrible storm at night. After he 2) …… (have) a shower, he made breakfast. After he 3) …… (eat), he got into his car and drove to work. He only 4) …… (drive) for five minutes when he remembered that he 5) …… (leave) his briefcase at home. He turned the car around and went home again. Then, he realised that he 6) …… (lock) himself out. The keys were still inside the house! Andrew was already late for work, so he decided to leave the briefcase and go to work. When he arrived, his secretary told him that his boss 7) …… (try) to call him at home.

Unit 5

Future Tenses. Future Simple. Future Continuous Futures

Form

There are a number of ways of making reference to future time. These indicate:

Present progressive:	I'm seeing him tomorrow.
Going to:	We're going to discuss the news.
Present simple:	His plane gets to Heathrow at 12.45.
Will:	It will probably arrive late owing to bad weather.
Future perfect simple:	I'll have arranged his hotel accommodation by then.
Future continuous (progressive):	He'll be staying at the Kharkiv Hotel.
Be + infinitive:	You are to tell nobody of our discussions.

Uses:

1. Talking about plans or arrangements.

We can talk about plans using the present progressive:

I'm meeting Mr. Brown next week. *He's arriving* on Tuesday.

2. Talking about present intentions

We use *going* to rather than *will* for plans, decisions and firm intentions:

She *is going* to leave in a month's time.

When *are you going* to visit us next?

3. Making predictions

To make a prediction we can use either will or going to:

I'm sure you will/ are going to enjoy visit to our University.

4. Making promises or offers.

Will is used to make a commitment for the future:

"Could you lend me $ 50? *I'll* pay you back tomorrow".

I don't know if I can finish the job by Friday but *I'll* do my best.

5. Official calendars and schedules.

For a future event based on an official calendar or schedule we use the present simple. The event is unlikely to change between now and then.

The train *leaves* from Waterloo at 17.00.

Our next planning meeting *is* on Wednesday.

6. Events completed before a future time.

For events that will be finished before a time in the future we use the future perfect simple:

By the time they arrive we *will have gone* home.

7. Events happening as a matter of course.

We use future progressive to describe situations which will arise in the future if things go on as predicted and follow their expected pattern:

No doubt the unions *will be asking* for more money.

Over the next few years average temperatures *will be rising.*

8. Future events still in progress

If an event is still in progress at a future time we use the progressive form:

This time next year *I'll lying* on a beach in the Crimea.

9. Making polite enquiries

The future progressive can be used to ask a question without giving the impression that we want to influence or direct people's actions. Compare:

Will you *be staying* for dinner? (an enquiry about plans)

Will you *stay* for dinner? (a request)

10. Using the present simple *after if, when, until, as soon as*

In time clauses we use the present simple to refer to the future. It is incorrect to use *will* in a time clause:

If you *give* us a discount we'll place a big order.

Switch off the lights when you *leave*.

Practice

1. You may not agree with these predictions but you can choose the right verb form anyway!

By 2020 the first men …… (land) on the planet Mars.

In the next 100 years, the Netherlands …… (disappear) under water.

In the second decade of the 21st century people …… (eat) more genetically modified food.

By 2030 Chinese …… (become) the language of international scientific communication.

Many people …… (live) to over 100 as medical science advances.

2. Complete these sentences using appropriate verb form using if, when, until, as soon as. (There may be more than **one** possible answer)**.**

1. I …… (get) in touch when I …… (return) from the Middle East.

2. If they …… (shut down) the plant, a lot of people …… (lose) their jobs.

3. We …… (start) until everyone …… (be) here.

4. He can't make a decision until he …… (see) the president.

5. A project to create a bacterial cell from inanimate chemicals …… (go ahead) as soon as it …… (receive) approval from an ethics committee.

3. Fill in the correct future form:

Technology has made such dramatic advances in the past decade that by the year 2050 who knows what changes 1) *will have taken* (take) place. It is quite likely that by 2050 we 2) …… (use up) most of the earth's natural resources and so we 3) …..… (rely) on wind power and hydropower for our energy needs. As a result of this shortage of energy, it is quite probable that scientists 4) …… (find) a way for us to live outside the earth. By the next century it's possible that people 5) …… (live) in cities on the Moon or perhaps in cities on the seabed. It is to be hoped that scientists 6) …… (discover) cures for fatal diseases such as Aids and, due to the advancement of genetic engineering, hereditary diseases passed down from generation to generation 7) …… (exist) no longer. It is quite possible that by 2050 life expectancy 8) …… (increase) to 100 and that we 9) …… (be able to) enjoy a healthier existence than now is possible. Another area likely to have been further affected by technology in the year 2050 is education. In schools, computers 10) …… (replace) teachers and many students 11) …… (stay) at home to complete their education. We 12) …… (see) changes in the work-place, too. The two main areas of employment 13) …… (be) the so-called creative and caring professions, and the disappearance of jobs in manufacturing 14) …… (result) in massive unemployment.

4. Fill in the correct present or future forms:

When you 1) …… (take) a holiday with our company, you 2) …… (have) the time of your life. As soon as you 3) …… (arrive), you 4) …… (feel) as if you 5) …… (be) in a different world. While you 6) …… (stay) with us, we 7) …… (do) our best to ensure that your holiday 8) …… (run) smoothly and you 9) …… (not/get) bored. Our company 10) …… (have) something to offer for all ages and tastes. If you 11) …… (want) to play golf, ride, sail or fish, our staff 12) …… (be) happy to make the necessary arrangements, or if you simply 13) …… (want) to relax and enjoy the breathtaking scenery we 14) …… (be) delighted to organise some guided walks. Before your holiday 15) …… (be) over, you 16) …… (already/plan) your next visit

5. Translate into English:

1. Я збираюся продати свою машину після Нового року.
2. Ви зустрінете своїх друзів в аеропорту?
3. Коли ви будете готові?
4. Щойно всі прийдуть, ми почнемо обідати.
5. Якщо послухаєте, я дам вам добру пораду.
6. Якщо вітер перестане, піде дощ.
7. Вони збудують новий міст через річку, якщо знайдуть гроші.
8. Боюсь, що це завдання буде важким для вас.
9. Якщо йому поталанить, він закінчить свою книжку цього року.
10. До зустрічі! Я домовився грати в теніс через півгодини.

6. Read the text and look carefully at each line. Some of the line are correct and some have a word which should not be there. If a line has a word which should not be there, cross the word out.

Tea Leaves

(0) There are 3,000 varieties of tea in the world. Interestingly,
(00) all of them had come from one tropical plant. Processing
(1) the harvested tea leaves turns them into either green, black
(2) or oolong tea. Westerners prefer in drinking black tea: tea
(3) in its most processed form. Green tea, the oldest form, it is
(4) the least processed and is flavoured the more in Japan and
(5) China. All three forms, however, have more various health
(6) producing chemicals. Studies have shown that of
(7) individuals who daily drink black tea, suffer less from some
(8) heart disease. Other studies show that tea gives a
(9) protection from cancer, high blood pressure and
(10) cholesterol. Applying green tea has also been found to be
(11) 90 % effective in preventing sunburns. In the future, if tea is
(12) expected to be an ingredient in sunscreens. Tooth decay
(13) it can also be prevented as well, because tea contains
(14) fluoride. So, by drinking 4 to 5 cups of tea every day could
(15) be a benefit to everyone by increasing our body's
(16) resistance to diseases.

Unit 6

Modals

The modal verbs are: **can, could, may, might, must, ought to, will, would, shall, should.** They take no **–s** in the third person singular. *She can sing well*. They come before the subject in questions and are followed by not in negations. "*May I use your phone*?"-"*I'm afraid you can't*". The modal verbs, except for "ought", are followed by an infinitive without to. *You ought to be there on time*. Certain verbs and expressions have virtually the same meaning as some modals. These are: need (=must), had better (=should), have to /have got to (=must), be able to (=can), used to (=would), etc. *You'd better go*. Modal verbs are used to express: ability, advice, criticism, logical assumptions, necessity, offers, obligation/duty, permission, prohibition, requests or suggestions.

Practice

A. Abilities

Match the personal qualities with the abilities on the right:

If you	**you can**
1. are computer literate	a) work well on your own
2. are trilingual	b) use different types of software
3. are good at mental arithmetic	c) solve problems rationally
4. are autonomous	d) be a good leader
5. have a creative personality	e) calculate quickly in your head
6. have a logical mind	f) speak three languages
7. are decisive and people accept your authority	g) bring new ideas to projects

B. Past abilities

Complete the sentences using either "could" or "managed to":

1. After a lot of discussion we …… strike a deal.
2. He was a brilliant linguist and …… speak over a dozen languages fluently.
3. I thought I was going to miss the plane but I …… get to the airport on time.
4. When I was younger I …… run several kilometres without feeling tired.
5. She …… to find a good job despite her lack of formal qualifications.
6. When we lived near the beach we …… go swimming every day.
7. She …… have left me a message – how was I supposed to know?

C. Indicating disapproval

React to these situations using "could have":

1. Why didn't she ring to tell me she would be late?
2. She had the facts and figures but left me in the dark.
3. It wasn't worth us taking a taxi, the station was within walking distance.
4. It took six days for the letter to arrive and we both have e-mail.

Rules and regulations

D. Complete these sentences so that they are true for your country. Use "have to", "don't have to" and " must":

1. You …… carry a gun.
2. You …… pay to use buses and trams.
3. You …… vote if you are over 18.
4. You …… drink alcohol at work.
5. You …… pay to drive on a motorway.
6. You …… wear a set belt when driving a car.

E. Degrees of likelihood.

This text deals with the likelihood of an earthquake in the San Francisco area. Decide where each of the phrases (a-h) fits into the passage:

The next big earthquake in the Bay area may come sooner than you think. There is a 67 percent chance of at least one earthquake of magnitude 7 or larger in the San Francisco Bay area between now and 2020. Such an earthquake …… (1).

Some scientists believe that the 67 percent probability estimate …… (2). They have noted several instances of pairs of earthquakes of magnitude 6.5 or larger in northern California, and they are concerned that the Loma Prieta earthquake …… (3). Other fault segments in northern California …… (4). Therefore it seems prudent to consider the 67 percent chance of a large earthquake within the next 20 years as a minimum estimate …… (5). Future studies are also likely to change. Scientists agree that:

*Earthquakes of magnitude 7 and larger are highly likely within the bay area during the next few decades.

- ✓ Each of these events …… (6) because each will probably be located closer to densely populated areas.
- ✓ Action is need now to reduce the damage and the number of deaths that …… (7) even if this …… (8).

a. might also be capable of producing large earthquakes;

b. may be too low;
c. could cause more damage than the Loma Prieta quake;
d. will result in changes in probability estimates;
e. could strike at any time, including today;
f. could be the first quake of such a pair;
g. may involve significant expense;
h. could result from future major earthquakes.

F. Permission, suggestions or offers.
Decide whether the following are requests for permission, suggestions or offers:

1. Shall we go for lunch?
2. May I sit here?
3. Shall I give you a lift into town?
4. Can I borrow the car this weekend?
5. Could I use your mobile phone?
6. You might like to check the exchange rate first.
7. Would you like us to send you a catalogue?
8. In my opinion you should sell your shares now.
9. Are you hot? I'll switch on the air conditioning if you like.

G. Uses of *will* and *would.*

Which of the following uses of *will* indicate willingness (W), refusal (R), a promise (P), a threat (T) or typical behaviour (TB)? Choose the appropriate letter for the following sentences:

1. I'll make sure John is informed. ……..…
2. Oil will float on water. ……..…
3. She won't listen, she's so stubborn. ……..…
4. Patrick will keep on asking stupid questions. ……..……
5. Either I get the job or I'll leave the company. ……..…..…
6. I'll take your calls for you while you are out. ……..…
7. Will you call him back when you've got a moment? ……...
8. I've changed the battery but my mobile phone still won't work. ….
9. She will always be the first person to arrive on a Monday morning.……
10. If you don't sign the new contract we'll have to move you to another post. ……

H. Translate into English:

1. Якщо кількість населення буде зростати і далі, то для кожного, можливо, не вистачить їжі.

2. Коли йому було 4 роки, він уже вмів читати.

3. Я зможу допомогти тобі наступного тижня.

4. Батьки повинні приділяти увагу своїм дітям.

5. У нього так багато книжок. Він, очевидно, любить читати.

6. Якщо ви хочете вступити в університет, ви повинні багато працювати.

7. Він не міг одержати листа в неділю. В неділю пошта не працює.

8. Вам краще зробити цю роботу сьогодні.

9. Я не дуже ретельно готувався до екзамену, хоча мені слід було працювати більше.

10. Я, можливо, не приїду завтра до вас, у мене невідкладні справи.

Unit 7

Passives

Form

We form the passive by using the appropriate tense of to be + a past participle:

Uranium **is mined** in Australia.

The company **was set up** in 1997.

It is also possible to use the passive with a modal verb:

The goods will be sent by rail.

The results may be delayed.

The subject of a passive verb corresponds to the object of an active verb:

Active Mexicans speak Spanish.

Passive Spanish is spoken in Mexico.

Uses:

1. Focusing on the action

We use a passive construction when we are not interested in who performs an action or it is not necessary to know.

The date **was changed.**

The missing file **has been found**.

He **has been promoted** to the post of Director.

If we want to mention who performs the action we can use a phrase beginning with **by:**

The decision was taken by the committee.

2. Focusing on information:

In a passive sentence, the grammatical subject receives the focus:

The visiting delegation **was met** by the president at the airport.

3. Describing a process or procedure:

We use the passive because we are more concerned with the process itself than who carries it out. For example, here is a description of the wine-making process:

Wine **is made** from the fermented juice of grapes. Grapes **are picked** at optimum sugar/acidity levels. After picking, the grapes **are taken** to the winery, **de-stemmed** and **crushed** in a variety of presses. The juice **is** then **clarified** by setting or by centrifuge, yeast and sugar **are added** and the wine **is left** to ferment in tanks. When fermentation **is finished** the wine **is poured** into a clean tank to stabilise. It **can** then **be filtered** and **bottled** and left to mature.

4. Writing in a formal style

When writing in a formal style (e.g. reports, minutes of meetings) we often choose an impersonal style by using the passive and beginning sentence with it.

It was agreed to increase the capital.

It was considered to be an unacceptable alternative.

Another common way of reporting what is said or thought is to use it + passive + that - clause:

It was agreed that the capital share should be increased.

It was felt that some economies had to be made.

Other verbs used in this pattern include:

Announce claim discover estimate expect know mention propose recommend suggest think understand

5. Reporting unconfirmed information

When the statement is speculative we use the passive of say, think, consider, believe followed by an infinitive. This structure is common in newspaper reporting:

The minister is said to be in favour of decreasing corporation tax.

He is considered to be the best student in our group.

The terrorists are believed to want a new cease-fire.

Practice

1. Make these sentences passive. Only use "by" if it is necessary to say who did the action:

1. Karl Marx wrote **Das Kapital.**
2. They are repairing your car now.
3. Steve Jobs founded Apple Computers.
4. Did anyone inform Mrs. Wilson?
5. They make Renault cars in Slovenia.
6. They have transferred him to the New York office.
7. They had made a full investigation.
8. I didn't realise someone was listening to my telephone conversations.
9. The group will discuss the proposal.
10. The princess opened the new conference centre.

2. The following passage describes the production of paper. Put the words in brackets into the appropriate form, using the passive when necessary:

From trees to pulp

The trees …… (transport) to the paper mill by lorry, train or ship. First the bark …… (remove). This …… (burn) at a later stage so that energy can …… (generate) for the paper-making process. Then the logs …… (cut) into chips and …… (cook) under high pressure for four hours to make paper pulp. Next the pulp …… (bleach) to …… (remove) dirt sports and …… (improve) its ageing properties.

From pulp to paper

The manufacturing process also …… (require) chemicals to strengthen the paper.

The fibres …… (mix) with additives and …… (dilute) with water. This mixture …… (spray) onto the paper machine where it …… (press), then …… (dry) and …… (wind) onto one large reel which …… (weigh) up to 20 tons. Each part of the process …… (control) by computers which automatically …… (correct) any errors.

3. Look at the notes, then write a report using the passive:

Yet again we experienced an earthquake last night

A remote area in northern Spain/shake/by an earthquake last night. Several villages/totally destroy/and many people/leave/homeless. The total extent of the damage/still not known/but luckily few casualties/report as people/warn/of the danger earlier and many villages/evacuate. Victims of the earthquake now/offer/shelter in local churches/where food and drink/provide.

4. Rewrite the following text in the passive:

After 20 years of civil war, the Lebanese government is rebuilding Beirut. They will construct new offices and hotels. The authorities must also expand Beirut airport. Luckily, bombing did not destroy archaeological sites. By the year 2010, building companies will have completed most of the work. Lebanon's new look will attract many tourists in the future. A few groups have already visited this Middle Eastern paradise.

5. Translate into English:

1. Їй пообіцяли нову ляльку на день народження.
2. Вам дадуть інструкції до вашого від'їзду.
3. Мені показали палац, в якому жив король.
4. Учням ще не показували цей новий фільм.
5. У неї запитали її адресу в готелі.
6. Нам порекомендували нового лікаря.
7. Вам запропонували роботу, про яку я вам говорив?
8. Доктору Брауну відмовили видати візу.
9. Ці діти дуже ввічливі.
10. Подивіться, що мені дали!

6. Complete the following passage with appropriate passive forms of the verbs in brackets:

A new campaign …… (launch) earlier this year by the UK government which aims to reduce the amount of domestic waste. Households …… (encourage) to recycle certain waste products and to sort and prepare others for collection at specific sites. From there they …… (take) to special waste treatment plants where special machinery will process them for reuse as recycled material. In Britain today, when the contents of the average household dustbin …… (analyse), we find that, in terms of weight, 35 % of the total …… (compose) of paper and cardboard, 22 % of kitchen waste, 12 % of plastics with glass, dust and ashes each representing a further 10 %.

There are in fact only a few items of domestic waste that cannot …… (recycle). One common example is disposable nappies which, as their

name suggests, …… (design) to be thrown away after use. However, a lot of progress could …… (make) to reduce the amount of kitchen waste most of which can …… (transform) into a useful garden fertiliser. Indeed, if more people chose to do this then the weight of the average dustbin …… (reduce) quite significantly.

Unit 8

Non – Finites: The Infinitive/ Gerund/ Participles

The Infinitive

Form:

The infinitive is the root form of the verb. There two kinds of infinitive:

a) the **to – Infinitive** e.g. **to stay, to go, to have, to spend**

b) the **bare infinitive** which is the root form of the verb without to e.g. **stay, go, have, spend**

e.g. They **want to spend** their life together.

They **would like to have** two children.

They **may buy** a car next year.

Forms of the Infinitive

	Active Voice	**Passive Voice**
Present	(to) play	(to) be played
Present Continuous	(to) be playing	
Perfect	(to) have played	(to) have been played
Perfect Continuous	(to) have been playing	

*Passive Present Continuous and Perfect Continuous Infinitives are rarely used.

Forms of the Infinitive Corresponding to Verb Tenses

Verb Tenses	**Forms of the Infinitive**
Present Simple/Future Simple she cleans/she will clean	**Present** (to) clean
Present Continuous/Future Continuous she is cleaning/she will be cleaning	**Present Continuous** (to) be cleaning
Past Simple/Present Perfect/Past Perfect/Future Perfect she cleaned/she has cleaned/she had	**Perfect** (to) have cleaned

cleaned/she will have cleaned	
Past Continuous/Present Perfect Continuous/Past Perfect Continuous/ Future Perfect Continuous she was cleaning/she has been cleaning/she had been cleaning/she will have been cleaning	**PerfectContinuous** (to) have been cleaning

Uses:

The to – infinitive is used:

1. To express purpose:

He went **to buy** some bread.
I went to the florist's **to buy** some flowers.
You should take a few days off **to recover**.

2. After certain verbs *(advise, agree, appear, decide, expect, hope, manage, offer, plan, promise, refuse, seem, want etc):*

I **hope to meet** him again.
He **refused to answer** my question.
He **agreed to meet** us tonight.

3. After certain adjectives (be + adjective) *(angry, annoyed, glad, happy, nice, pleased, sorry etc):*

I'**m glad to see** you here.
Jack **will be glad to see** you.
It **is nice to be** back home.
I **was sorry to hear** about your accident.

4. After I would like/ would love/ would prefer to express specific preference:

I **would like to stay** here.
I **would like** the girls **to stay** here.
I'**d love to see** you tonight.
I'**d love to visit** India.

5. After certain nouns:

It's such a **pleasure to be** with you.

6. After too/enough constructions:

He'**s too** old **to drive**.
She'**s** clever **enough to understand** it.
It'**s too** cold **to go** outside.
Joe **isn't** old **enough to vote**.
It'**s too** early **to leave** the party.
He'**s** rich **enough to afford** a Porsche.
There'**s enough** food **to go** round.

7. With: it + be + adjective (+ of + noun/pronoun):

It was unkind of her to say that.

8. After some verbs such as know, learn, remember, ask, want to know etc. when there is a question word (who, what, which, where, when, how etc.) after them:

I don't **know what to do.**

I don't **know how to answer** this question.

NOTE!

Why is not followed by an infinitive, but by a subject + verb:

Nobody knew **why** he was angry.

I didn't know **why** he was crying.

9. After *be + the first/second etc., next/ last/best etc*.:

She **was the first to congratulate** him.

10. In the expression: for + noun/pronoun + to –infinitive:

For John to lend you his car was very unusual.

11. In the expressions such as: *to tell the truth, to begin with, to be honest etc.:*

To **be honest**, I didn't know how to react.

NOTE!

If two infinitives are joined by "and" or "or", the "to" of the second infinitive can be omitted:

I'd prefer to go to a disco **and dance or talk** to my friends.

The bare infinitive is used:

1. After most modal verbs (can, could, may, must etc.):

We **must leave** soon.

He **can go** if he wants to.

2. After *had better/would rather/would sooner:*

You'd **better go** to bed.

3. After make/let/see/hear/feel + object in the active.

Let me **go** or I'll **make** you **regret** it.

She **made** the baby **eat** all the soup.

Her parents **let** her **stay** out till midnight.

Gerund

Forms of the Gerund:

	Active Voice	**Passive voice**
Present	playing	being played
Present Continuous	----	----

Perfect	having played	having been played
Perfect Continuous	----	----

Uses:

1. As a noun:

Smoking is harmful. **Walking** is a good form of exercise.

2. After certain verbs (admit, anticipate, appreciate, avoid, confess, consider, continue, delay, deny, discuss, enjoy, escape, excuse, fancy, forgive, go (physical activities), imagine, involve, keep (= continue), look forward to, mention, mind, miss, object to, postpone, practice, prevent, quit, recall, recollect, regret, report, resent, resist, risk, save, spend, stand, suggest, tolerate, understand, waste etc):

I don't **mind helping** you with the dishes. Tony **avoided answering** my question.

I **object to being told** what to do with my life.

They have **postponed moving** house till next week.

3. After: dislike, enjoy, hate, like, love, prefer to express general preference:

I **like swimming**. I **love going** to discos. Helen **likes watching** old films on TV.

NOTE!

like + to-infinitive = it's a good idea

I **like to help** people. He **likes to watch** the birds.

4. After the verbs start, begin, stop, finish:

He **started doing** his homework at 5 o'clock.

He **started writing** his composition an hour ago.

5. After: I'm busy, it's no use, it's (no) good, it's (not) worth, what's the use of, be/get used to, get accustomed to, can't help, there's no point (in), can't stand, have difficulty (in), in addition to, as well as, have trouble, have a hard/difficult time:

It's worth seeing that film. Father **is busy repairing** the car.

There's no point in arguing. What's the use of crying?

6. After prepositions:

He left **without taking** his coat. I'm tired **of going** to work by bus every morning.

He became rich **by working** hard and **without borrowing** from anyone.

7. After: hear, listen to, notice, see, sound, watch to express an incomplete action, an action in progress or a long action.

I **saw** her **crossing** the street. (I saw her while she was crossing the street.)

I **saw** him **throwing** rubbish out of the window. (I saw part of the action. I didn't wait until he had finished. Perhaps he threw more rubbish.)

NOTE!

hear, listen to, notice, see, sound, watch + infinitive without "to" express a complete action, something that one saw or herd from beginning to end.

I **saw** her **cross** the street. (I saw her when she had crossed the street.)

Participles

Forms:

The participles are:

a) present participles (staying, leaving, running, etc.)

b) past participles (stayed, left, written etc.)

c) perfect participles (having left, having written etc.)

Uses:

1. As adjectives:

Present participles (verb + ing) describe what somebody or something is (they answer the question "What kind?").

It was a **boring** lecture. (What kind of lecture? Boring.)

It's a very tiring job. (What kind of job? Tiring.)

It was an **embarrassing** situation. (What kind of situation? Embarrassing.)

Past participles (verb + ed) describe how someone feels (they answer the question "How do you feel?").

They were **bored** by the lecture. (How did they feel during the lecture? Bored.)

He's very **tired.** (How does he feel? Tired.)

He was **embarrassed**. (How did he feel? Embarrassed.)

We were **bored** by the film. (How did we feel during the film? Bored.)

2. To express time:

After doing/having done her homework, she watched TV.

Having done her homework, she watched TV. (= **After she had done her homework**, she watched TV.)

He broke his arm **(while) playing hockey**. (= He broke his arm **while he was playing hockey.)**

We met John **while shopping**. (= We met John **while we were shopping**).

3. To express reason:

Being late, Adam took a taxi. (= **Because he was late**, Adam took a taxi.)

Having spent all her money, Pam asked for a loan. (= **Because she had spent all her money**, Pam asked for a loan.)

Feeling shy, Laura didn't talk to Ben. (= **Because she was shy**, Laura didn't talk to Ben.)

4. Instead of relative pronoun and full verb:

The man **standing** at the door is my boss. (= The man **who is standing** at the door is my boss.)

The information **presented** in the article was invaluable. (= The information **which was presented** in the article was invaluable.)

The woman **waving** at me is my aunt. (= The woman **who is waving** at me is my aunt.)

5. Instead of the past simple in narratives when we describe actions happening immediately one after the other:

Seeing the shadow, he **screamed**. (= He **saw** the shadow and he **screamed**.)

Hearing the news, she **fainted**. (= She heard the news and she fainted.)

6. To avoid repeating the past continuous in the same sentence:

She was climbing up a ladder **carrying** a bucket. (= She **was climbing up** a ladder and she **was carrying** a bucket.)

Practice

1. Write what each word is followed by: F.I. (full to-inf.), B.I. (bare inf.) or –ing form:

1. want	10. promise	19. hate	28. hear
2. dislike	11. expect	20. must	29. it's no good
3. would love	12. it's no use	21. refuse	30. decide
4. it's worth	13. hope	22. would rather	31. mind
5. finish	14. let	23. would	32. what
6. will	15. shall	24. object to	33. used
7. make	16. can	25. be known	34. suggest
8. avoid	17. start	26. would like	35. be seen

9. see 18. deny 27. admit 36. risk

2. Fill in the correct tense form of the infinitive:

1. We'd better not bother her – she seems …..…. (study).
2. The accused denied …… (do) anything wrong.
3. Paul pretended …… (win) a lot of money but in fact he had won nothing at all.
4. She must …… (work) outdoors when we rang. She didn't answer the phone.
5. Jane hoped …… (give) the prise, but someone else won it.
6. He seemed …… (swim). He was all wet.
7. I should …… (give) him some money before I went out, but I forgot.
8. She says she would love …… (come) to dinner with us tonight.
9. He must …..…. (practice) that piece for hours – he plays it very well now.
10. The athlete seemed …… (be) out of breath – he must …… (run) for hours.
11. Peter claims …… (choose) as the best-dressed man of the year.
12. They could …….. (prepare) a meal for us last night instead of making us go out to eat.
13. John must …… (be) very busy these days – I never see him.
14. The house looks so clean now. She must …… (clean) all day.
15. Jan should …… (give) us her new address before she left.
16. The two men appeared …… (try) to break into the building when the police arrived.
17. You should …… (study) now instead of watching TV.

3. Fill in the -ing form or the infinitive in the appropriate tense form:

Tom: Do you think Mary would like 1) …… (go) to the theatre with me tonight?

Jo: I don't think so. She seems 2) …… (study) very hard at the moment.

Tom: That's a shame! I would have liked 3) …… (go) out with her.

Jo: I wouldn't mind 4) …… (come) with you.

Tom: OK. But I think you should 5) …… (talk) to Mary. The last time I saw her she claimed 6) …… (work) till 2 o'clock every morning for the past month. It's not good for her, you know.

Jo: I know. I must 7) …… (talk) to her about it. But you know how she hates 8) …… (tell) what to do.

4. Complete the conversation using the infinitive or the –ing form:

A: Good morning, madam. Can I 1) …… (help) you?

W: Yes. I'd like 2) …… (book) a holiday please.

A: Certainly. I must 3) ……. (ask) you a few questions. Now… where would you like 4) …… (go)? How long are you going 5) …… (stay)? Would you prefer 6) …… (have) a relaxing beach holiday or 7) …… (go) sightseeing? Which countries are you interested in 8) …… (visit)? What means of transport do you prefer?

W: Well, young man. I don't know where 9) …… (go) or how long 10) …… (stay). I hate 11) …… (go) to the beach and I don't enjoy sightseeing. I don't want 12) …… (visit) any foreign countries because foreign food makes me 13) …… (feel) ill. As for means of transport, I'm too frightened 14) …… (fly) in an aeroplane. I hate 15) …… (go) on boats, I don't like 16) …… (travel) by train and 17) …… (travel) on a coach makes me 18) …… (feel) sick.

A: Well madam, I don't know what 19) …… (suggest). I don't want 20) …… (appear) rude, but I really think you should 21) …… (stay) at home!!!

5. Put the verbs in brackets into the –ing form or the infinitive without "to":

Last night I heard car brakes 1) …… (screech) and people 2) …… (shout) in the street. When I looked out of the window I saw a crowd of about twenty people 3) …… (stand) around a young boy 4) …… (lie) in the street. Next, I saw the driver of the car 5) …… (approach) the crowd and 6) …… (kneel down) by the boy, he was 7) …… (look) very anxious. 8) …… (watch) the drama from my window, I began 9) …… (consider) the boy's family. Then a few minutes later, I saw a young woman 10) …… (run) towards the scene and 11) …… (push) her way through the crowd. Soon, I heard an ambulance siren 12) …… (scream) in the distance, 13) …… (get) closer and closer. Then I saw the ambulance stop in front of my house. I watched the ambulance men 14) …… (get out) and 15) …… (run) to the injured boy. Minutes later I saw them 16) ……. (run back) to their ambulance with the boy on a stretcher followed by his mother.

6. Cross out the unnecessary word:

1. He went to the florist's for to buy a bouquet of flowers.
2. Emily is not so talented enough to enter the competition.
3. I don't go for camping very often.
4. Mrs Keaton made her daughter to stay at home during the holidays.
5. I hope that to hear from you soon

6. We saw Helen to get into her car and dive away at top speed.

7. Fill in the infinitive with or without "to", or the –ing form:

1. Charlie goes …… (swim) every morning in summer.
2. Thompson admitted …… (murder) his wife.
3. He left England …… (live) in another country.
4. I think you'd better …… (go) home.
5. It was kind of you …… (lend) me your jacket.
6. He ran all the way home without …… (stop).
7. The teacher made him …… (write) the composition again.
8. What's the use of …… (cry)?
9. Remember …… (go) to the bank. You've got to pay the bills.
10. I don't remember …… (see) this film before.
11. When he had written his first book he went on …… (write) seven more.
12. She went on …… (talk) even after her friend had fallen asleep.
13. I regret …… (leave) school at the age of 16.
14. I regret …… (tell) you that you have failed the test.
15. He means …… (build) a boat and travel round the world.
16. Doing well on this course means …… (study) very hard.
17. I've been trying …… (start) this car for hours.
18. Why don't you try …… (put) some petrol in the tank?
19. I don't want to drive a car; I'm afraid of …… (have) an accident.
20. He's afraid …… (walk) alone at night.
21. She forgot …… (invite) her best friend to the party.
22. I'll never forget …… (see) snow for the first time.
23. On the way home he stopped …… (buy) some chocolate.
24. The baby didn't stop …… (cry) all night.
25. These windows are dirty. They need …… (wash).
26. I want …… (speak) to Sally, please.
27. She's really sorry for …… (shout) at you last night.
28. I'm sorry …… (tell) you your car has been stolen.
29. He's got enough patience …… (be) a teacher.

8. Fill in the correct participle:

Paul: You must be very 1) …… (excite). Paris is a 2) …… (fascinate) city. There are so many 3) …… (interest) things to do. You won't be 4) …… (bore).

Jane: Well, I'm a bit 5) …… (worry) because I can't speak French very well.

Paul: You should buy a phrase book and then you won't be 6) …… (embarrass) if someone speaks to you. They won't be 7) …… (annoy) if you make a mistake, and most people will be 8) …… (please) if you ask for something in French.

Jane: I'm they'll find my accent very 9) …… (amuse).

Paul: Don't be silly. I'm sure you'll have a very 10) …… (stimulate) holiday.

9. Choose the correct word:

1. The children were *thrilled/thrilling* with the clown's tricks.
2. The adventure was *excited/exciting.*
3. She was *interested/interesting* in anything antique.
4. Her experience was *terrified/terrifying.*
5. The police were *puzzled/puzzling* by the clues.
6. What an *amazing/amazed* person he is!
7. He was very *surprised/surprising* by her sudden change of attitude.
8. She felt *relaxed/relaxing* in the hot sun.
9. He was *disturbed/disturbing* by the threatening phone calls.
10. He found the history lesson extremely *bored/boring.*
11. He was *encouraging/encouraged* towards his children.
12. They found the film very *excited/exciting.*
13. He was *exhausting/exhausted* after the marathon.
14. They were *worrying/worried* that they would be late.
15. Her behaviour is extremely *annoying/annoyed.*
16. We were *shocking/shocked* by his behaviour.
17. She told us a very *entertaining/entertained* story.
18. They were all *surprising/surprised* when he turned up at the party.
19. That book is really *interested/interesting.*
20. They were *fascinated/fascinating* by the view.

10. Rewrite the sentences using participles:

1. Because she was tired, Katie went to bed. ..……
2. He was sitting in the garden and he was drinking his tea. ……..
3. After Janet had made dinner, she called the children. ..……..
4. The boy who is standing by the door is my brother. ……..
5. Simon cut his hand while he was chopping some wood. ……..
6. Donna had a shower before she went to bed. …….
7. Because we were late, we took a taxi. ……....
8. Gary opened the window and breathed the fresh air. ……
9. She was lying on her bed and she was reading a book. ……..

10. The jewels which were taken by the thieves were very valuable. …
11. Amy picked up her pen and started to write the letter. …….
12. The man who is walking towards us is a relative of mine. ……...
13. After the teacher had explained the exercise, he asked the students to do it.
14. Because she had forgotten to take her purse, she had to borrow some money from a colleague. ……....
15. Lisa took a deep breath and dived into the water. ……...
16. Jack burned his finger while he was lighting a fire. ..……..**...**
17. After Ann had ironed the clothes, she put them away. ……...
18. Because he was cold, James turned on the heater. ……...
19. The photographs, which were taken at the reception, were blurred.

Unit 9

Conditionals

Forms:

Conditionals are clauses introduced with **if**. The main types of conditionals are: Type 0, Type 1, Type 2, Type 3.

Conditional clauses consist of two parts: the **if – clause** (hypothesis) and the **main clause** (result). When the if – clause comes before the main clause, the two clauses are separated with a coma. When the main clause comes before the if – clause, then no comma is necessary.

If the weather is good tomorrow, we will got o the beach.

We will go the beach **if** the weather is good tomorrow.

	If – clause (hypothesis)	**Main clause (result)**	**Use**
Type 0 (general truth)	if + present simple	present simple	Something which is always true
Type 1 (real present)	if + present simple, present continuous, present perfect or present perfect continuous	future/imperative/can / may/might/must/ should/could + bare infinitive	Real – likely to happen in the present or future
Type 2 (unreal	if + past simple or past continuous	would/could/might + bare infinitive	Imaginary situation contrary to facts in

present)			the present; also used to give advice
Type 3 (unreal past)	if + past perfect or past perfect continuous	would/could/might + have + past participle	Imaginary situation contrary to facts in the past; also used to express regrets or criticism

Uses:

● ***Type 0*** conditionals are used to express something which is always true. We can use **when** (= whenever) instead of **if:**

If/When the sun **shines**, snow **melts**.

If/When it **rains**, the roads **get** slippery and dangerous.

If/When the temperature **falls** 0°C, water **turns into** ice.

● ***Type 1*** conditionals are used to express real or very probable situations in the present or future:

If he **doesn't study** hard, he **won't pass** his exam.

If we **work** hard, we'**ll finish** the project on time.

If you **need** help, **come** and **see** me.

If you **have finished** your work, we **can have** a break.

If you'**re** ever in the area, you **should come** and **visit** us.

● ***Type 2*** conditionals are used to express imaginary situations which are contrary to facts in the present and, therefore, are unlikely to happen in the present or future:

If I **won** the lottery, I **would buy** an expensive car and I **would go** on holiday to a tropical island next summer.

If I **had** time, I **would take up** a sport.

If I **were** you, I **would talk** to my parents about it.

● ***Type 3*** conditionals are used to express imaginary situations which are contrary to facts in the past. They are also used to express regrets or criticism:

If John **hadn't got up** late, he **wouldn't have missed** the bus.

If she **had studied** harder, she **would have passed** the test.

If he **hadn't been acting** so foolishly, he **wouldn't have been punished**.

● We can form conditionals by using words/expressions such as **unless** (Type 1 conditionals), **providing/provided that, so/as long as, on condition (that), what if, suppose/ supposing, otherwise (= if not), but for, and, or (else), even if, in case of/in the event of**, etc.

Unless you **help** me, I won't finish on time. (= If you don't help me, …)

I'll water the plants **providing/provided (that)** I have time this afternoon. (If I have time…)

So/As long as you promise to be back by midnight, you can go to the party. (If you promise …)

He agreed to work Saturdays **on condition that** he was paid overtime. (If he was paid …)

"I'll take Dad's car tomorrow night." "**What if** he needs it?" (= What will you do if he needs it?)

Suppose/Supposing you were fired, what would you do? (= If you were fired, …)

We'd better leave now. **Otherwise** we'll miss our flight. (If we don't leave now, we'll miss our flight.)

But for your advice, I wouldn't have been able to solve my problems. (If you hadn't advised me, …)

Do that again **and** I'll punish you. (If you do that again …)

Don't do that again **or (else)** I'll punish you. (If you do that again …)

I wouldn't go to the party **even if** they invited me.

In case of/In the event of a fire, sound the alarm. (If there is a fire …)

● We do not normally use **will, would** or **should** in an if-clause. However, we can use **will** or **would** after if to make a request or express insistence or uncertainty (usually with expressions such as I don't know, **I doubt**, **I wonder**, etc.). In this case, **if** means **whether**. We can also use **should** after **if** to talk about something which is possible, but not very likely to happen.

If you ***will wait*** a minute, Mr Carrington will be able to see you. (Will you please wait… – polite request)

If you ***will go on*** making so much noise, I'll send you out. (If you insist on making… – insistence)

I ***wonder if*** he'***ll call*** me tomorrow. (I wonder whether… – uncertainty)

If Paul ***should turn up,*** tell him to wait for me. (I don't really expect Paul to turn up.)

● We can use *were* instead of *was* for all persons in the if-clause of Type 2 conditionals. We use *If* I *were you* … when we want to give advice:

If Andrew ***was/were*** taller, he could be a basketball player.

If I were you, I wouldn't travel on my own.

● We can omit *if* and inversion in Type 1, 2 and 3 conditionals. This structure is more common in formal English:

Should he fail to be re-elected, it would be a great disappointment for him.

Were he more careful, he would make fewer mistakes.

Had she been asked, she would have given her permission.

● All types of conditionals can be mixed. Any tense combination is possible if the context permits it.

If they were working all day (Type 2), they will be tired now (Type 1).

If I were you (Type 2), I would have accepted the job (Type 3).

If he were a better driver (Type 2), he wouldn't have crashed the car. (Type 3).

If she had finished earlier (Type 3), She would be going to the party tonight (Type 2).

Practice

1. Fill in the gaps with if or when and a verb in the present tense, then translate the sentences:

1. We might go for a walk tomorrow. ……, we will take the dog with us.
2. The guests will arrive soon. ……, we will greet them at the door.
3. I am going to phone Sam in a minute. …… him, I want you to leave the room.
4. I might visit Pamela tomorrow. …… her, I will buy her a present.
5. The bus comes at eight o'clock. ……, we will all get on it.
6. She might invite us to her party. …… us, we will go.
7. The film will start soon. ……, I will record it.

2. Rewrite the following as conditional sentences:

1. You need to go to Egypt to see the Sphinx. If ……
2. John didn't leave early so he didn't there on time. If …….
3. She used factor 12 suntan lotion as she gets sunburnt easily. If ….
4. The fax machine is broken so I'll have to send it by post. If …….
5. Calling her might make her feel better. If ……...
6. There'll be an election if the president resigns. Providing …….
7. More tickets need to be sold, otherwise the concert will be cancelled.If ……..
8. You'll have trouble selling your house if you're not prepared to accept a lower offer. Unless……...
9. He cancelled his trip because he had run out of money. If …….
10. Tom didn't wear a coat and caught a cold. If ……....
11. You need to study to pass this exam. Unless …….
12. You really ought to go somewhere sunnier to get a suntan. Unless….
13. He doesn't know her. That's why he didn't speak to her. …….
14. He lost his job. He's unemployed now. …….

3. Put the verbs in brackets into the correct tense, then identify the types of conditionals:

1. If you …… (not/put up) this shelf, you won't have anywhere to put your books.
2. If he …… (change) jobs, he would be a lot happier.
3. If I were you, I …… (tell) her how you feel.
4. If you continue to shout so loudly, you …… (wake up) the baby.
5. Even if he …… (ask) them, they wouldn't have agreed to come.
6. Unless you … (feel) any better, you can take the rest of the day off.
7. If she …… (not/ threaten) him, he wouldn't have left.
8. I …… (not/trust) him if I were you.
9. If you're patient for a few minutes, I …… (be able) to finish this.
10. He …… (not/go) with her if he had known she would behave so irresponsibly.
11. I wouldn't have been able to do it unless she …… (help) me.
12. Sometimes if you …… (take) a chance, it pays off.
13. If he …… (wake up) earlier, he wouldn't have been late for work.
14. If they will go on making so much noise, I … (have to) punish them.
15. If we …… (intend) to spend the day in London, we would have bought a day pass.
16. Keep your voice down in case he …… (overhear) us.
17. If she …… (be) more experienced, she would be more likely to get a job.
18. If the food …… (not/be) so bad, we wouldn't have complained.
19. Sales will increase provided that the advertising campaign …… (be) successful.
20. If you …… (spend) less on clothes, you would be able to save some money.
21. If I …… (be) you, I wouldn't drive in the snow.
22. Peter …… (be able to) help you if he was here.
23. If I had closed the window, the cat …… (not/jump) out.

4. Complete the text by putting the verbs in brackets into the correct tense:

If I were world leader, I 1) …… (try) to stop the destruction of the earth and 2) …… (make) the world a better place for all people. If the world's problems had been tackled sooner, the quality of life 3) …… (improve) long ago. First of all, I would try to bring about peace in the world. As long as there is fighting between nations, millions of people 4) …… (continue) to suffer and die. If wars continue, children 5) …… (be left) without parents and 6) …… (grow up) in a world of misery and fear. But as

long as people disagree over land and possessions, the fighting 7) …… (go on).

Therefore, I would ensure that all people were treated as equals and given the same opportunities in life. It would also help if all countries 8) …… (stop) producing arms so there would no longer be the weapons with which to fight. In addition, I would introduce laws to reduce pollution. If pollution levels had been controlled earlier, life 9) …… (not/become) so unbearable. If I 10) …… (have) the power, I would ban all cars from city centres and increase public transport. If there more trees, the air we breathe 11) …… (be) cleaner. Unless measures are taken soon, it 12) …… (be) too late both for ourselves and our children.

5. Rephrase the following in as many as possible using the words from the list below:

only if, otherwise, as long as, unless, providing, on condition that, if

1. Should you go to Rome, you must see the Coliseum.
2. You can swim but there must be an adult with you.
3. Drive carefully so that you won't have an accident.
4. He will get a bonus if productivity increases.
5. I'll lend you the money, but you must pay me back soon.
6. I must think twice before accepting his offer in your place.

6. Rewrite the following as mixed conditional sentences:

1. He is not an honest person so he didn't tell the truth. ...……
2. They were awake all night so they are tired now. ….……
3. You didn't tell me earlier so we are not going to the cinema tonight. …
4. She didn't cancel the milk so the milkman keeps delivering it. ..…..
5. The ship left Plymouth yesterday so it will be in Spain now. ……..
6. They were painting the house all day so they are covered in paintnow… ……..……...
7. She didn't do her homework so she's in trouble with her teacher. …
8. She is so disorganised that she missed the deadline. …….
9. The children were playing in the garden all day so they are very dirty now. …… ……..…
10. He doesn't take his job seriously so he wasn't promoted. ...……

7. Complete the following sentences:

1. If only I had kept my appointment with the dentist yesterday, …
2. I wish I had paid my electricity bill, …… .

3. If I were Prime Minister, I ……
4. If it rains tomorrow, …… .
5. Pete wishes he had worked harder at school, ……...
6. Sarah will go to the party if ……..
7. If only I had more money, ……
8. Liz wishes she had got up earlier, ……..……..….....
9. If only Jo hadn't locked her keys in the car, …….
10. If John gets a promotion at work, ……
11. If the government bans smoking in public areas, ……
12. If only I hadn't shouted at Julie, ……..
13. If Jenny had locked the front door, ……..
14. If you are late for a job interview, ……
15. If you have a headache, ……
16. Were I you, ……
17. If I hadn't met her, …….
18. If they had been more careful, ……..
19. Only if you work hard ……...…

8. Complete the sentences using the words in bold:

1. I would have lent you my car but I didn't know you needed to borrow it.

had If …… needed to borrow my car, I would have lent it to you.

2. As long as you are very careful, you can use my CD player.

provided You can use my CD player …… very careful.

3. If there isn't an interpreter at the conference, she won't be able to understand the speakers.

unless She won't be able to understand the speakers …… at the conference.

4. He didn't get the job because he was late for the interview.

would If he hadn't been late for the interview, he …… job.

5. I only learnt to drive because you taught me.

never I …… drive if you hadn't taught me.

6. You'd better see a doctor.

were If …… see a doctor.

7. Tim will be able to operate the machine but somebody must show him how.

only Tim will be able to operate the machine …… how.

8. She didn't take an umbrella so she got completely soaked.

have If she had taken an umbrella, she …… soaked.

9. I will buy a new car but I must save enough money first.

save Provided …… first, I will buy a new car.

10. She broke her leg so she couldn't go skiing.

broken If …… leg, she could have gone skiing.

11. Kay can't be at home, otherwise she would have answered the phone.

would If Kay …… have answered the phone.

12. I would be grateful to receive any information you may have.

could I would be grateful …… any information you may have.

13. Karen can make the pie but she must have the recipe.

long Karen can make the pie …… the recipe.

14. If you see Miles, can you ask him to contact me immediately?

see Should …… ask him to contact me immediately?

9. Rewrite the following as conditional sentences:

1. You felt sick and you missed your friend's birthday party. ……
2. You got up late and you missed the train. ……...……
3. You weren't offered the job because you weren't qualified.……...
4. You're not a senior staff member so you can't use a car park. …...…
5. You didn't go to the meeting so you didn't hear about the safety inspection……...
6. You want to go away for the weekend but you've got lots of homework. ……. …
7. You want a pet but you're allergic to animals. …..……..
8. You damaged the video because you didn't know how to connect it. …..
9. You like chocolate but you're on a diet. …….……....
10. You enjoy playing tennis but you have twisted your ankle. ……..…

Part 3

Social English

Unit 1

Greetings and Introductions

1. Work in pairs. Answer the questions:

When do people in your country shake hands?

What do you say in English when you don't hear a person's name?

When do you say "Good morning / Good afternoon / Good evening / Good night?

2. Look at the introductions and greetings from three conversations. Underline the phrases people use when they meet someone for the first time:

1. Excuse me, are you…?
Hello, how are things?
May I introduce myself, I'm…
Pleased to meet you.

2. Let me introduce you to…
I'd like to introduce you to…
Good to see you again.
How are you?

3. Nice to see you again.
How do you do?
How's life?
How's the family?

3. Match the phrases to the correct responses:

How are you?	Yes, that's right.
Pleased to meet you.	Then you must call me Ann.
How do you do?	Very well, thank you. And you?
Please, call me James.	How do you do?
How's life?	Pleased to meet you, too.
Hello, are you Roberto?	Not too bad, but very busy.

4. You are seeing your colleague off. You are at the airport. Make up a dialogue using the following phrases:

I must go now.	I look forward to seeing you again.
It was very nice meeting you.	I really enjoyed meeting you, too.
Have a good trip back.	Thank you, and the same to you.
I hope to see you again.	

5. Role-play: Walk around and introduce yourself to other people in the group.

Greet someone you know. Practise introducing people and saying goodbye.

Managing a conversation

1. Introducing a topic:

We very often use questions as an invitation to someone to develop a conversation. For example:

Did anyone see the film on television last night?

Have you heard about the change in plan?

We can also make an obvious statement such as:

You'll never guess what happened to me yesterday.

2. Changing a topic:

If you want to change the direction of a conversation you can say:

By the way, Jim phoned.

While I think of it, Jim phoned.

While we're on the subject of motivation, what kind of incentives do you offer?

3. Attentive listening:

When listening to another speaker, we usually react to what is being said by using various noises and expressions of encouragement and co-operation:

uh-huh……	right……	oh,really,...	oh, dear ……	is that so?
Yeah….	mm…….	I see!	yes, of course..	that's great..

If we don't respond like this, we give the impression that we are not listening or are bored and the speaker may ask a question to check that we are following.

4. Echoing:

Another way of showing that you are listening is to repeat a key word or phrase from what the other speaker has just said. For example:

A: So, anyway, I said that I couldn't possible accept 5 %.

B: Five per cent?

A: Yeah, 5 %, it's just not enough.

A: …and I was going to phone her before she got back from the meeting.

B: Before she got back?

A: Yeah, because I needed a decision quickly.

5. Following the conversation:

If we are having difficulty understanding, it is appropriate to ask for repetition or clarification:

Sorry, I don't quite follow you. What was that again?

What was that you said about…? I didn't get that bit about…

6. Keeping going:

In conversation we need time to plan what we are going to say. In order not to hesitate too much and allow other people to intervene before we want them to, we use short expressions to gain thinking time:

Well, as I was saying… Anyway… I mean…

And that's not all… So you see… And as you probably know…

If we cannot think of a precise word and want to avoid hesitation, we use vague, imprecise language such as:

A kind of… a sort of ... …or something…

it's a bit like a… ...and stuff like that…

7. Ending a conversation:

The end of a conversation has to be "negotiated" so that no one is left talking:

"Well, I think that's all for now. I'd better be going".

"Right. So, I'll see you on Wednesday, then".

"OK. Yeah, Wednesday. Well, I'll let you get back to what you were doing".

"Right. OK, Have a good trip".

"Thanks. Bye".

"Bye".

Practice

1. Learn the following dialogue:

- Is there anything I can do? I'd like to help in some way if I can.
- I can't think of anything at the moment.
- Well, maybe I could run errands or something.
- You could if I needed something.
- I feel so useless just hanging around with nothing to do.

- Don't worry. In a couple of days there'll be too much to do. Then you'll want to be back in these lazy days.
- I guess I'm just a workaholic. I never was very good at doing nothing.
- Maybe you should learn how to relax and enjoy yourself more.

2. Read the dialogue and fill in the gaps:

- Is there anything I …… do? I'd like to … in some way if … can.
- I can't think …… anything at the moment.
- …… , maybe I could run …… or something.
- You could …… I needed something.
- I …… so useless just hanging …… with nothing to do.
- .… worry. In a couple …… days there'll be too …… to do. Then you'll …… to be back in …… lazy days.
- I guess …… just a workaholic. I …… was very good at …… nothing.
- Maybe you should …… how to relax and …… yourself more.

Words and expression

-To run errands – to go on a short trip in order to do something for someone else or to deliver a message
- To hang around – waste time in idleness
- Lazy days – leisurely days
- Workaholic – person who seemingly is unable to stop working or who works to excess, avoiding rest and leisure

Conversation in Context

- Who are the speakers?
- Why does one of the speakers feel useless?
- What advice is given to one of the speakers?

Personal application

- Are you a workaholic? If not, do you know one?
- In what ways do you prefer to relax?
- Do you ever have to run errands?

3. Introduce a topic of conversation that will elicit these answers:

1. ……
Yeah, she told me yesterday.
2. ……
No, I didn't, but I heard that it was very good.
3. ……
No, I haven't. What's happening?
4. ……

No. What went wrong?

4. Unscramble these fragments of two conversations:

A: And if you book before the end of the month you get a 10 % reduction.

B: Well, I thought there was something wrong with the system.

A: Yeah, that' s what it said on the leaflet.

B: Something wrong?

A: Before the end of the month?

B: Yeah, but it was working in the morning.

5. Look at the way *sort of* and *kind of* are used in the following speech extracts. Match them with the approximate "translations" (a, b, c) below:

1. … and I think you know when some people are speaking English it's *kind of* like having a hot potato in your mouth…

2. … and if you didn't agree with him he got *kind of* angry.

3. … er, no, it doesn't take that long to get authorisation, er, it's only sort of three of four months, I think.

4. … and she didn't like living there and had a kind of nervous breakdown.

5. … and Management by Objectives is a technique which has sort of gone out of date.

a. about

b. it seems

c. in a way

Unit 2

Telephoning

Making contact

Hello. This is … (Mike Burt)	
Is that … (Irina Ivanova?)	Yes, speaking.
I'd like to speak to … (Mr. Brown)	Who's calling, please?
Could I speak to … (Ken Weiss)?	May I know who's calling, please?
I'm calling about … (the letter I sent you)	Hold the line, please.
I'm sorry … (Mr. Weiss) is in a meeting at the moment.	
I'm afraid … (he's) busy at present.	

(She) isn't here.

Leaving a message

Can I take a message?
… leave a message?
Could you take a message?
Could you ask … her to call … Mike Burd?
… tell him that … Duncan Ross called?
Could you spell your name, please?
What's the number, please?

Practice

1. Work in pairs. Practise this telephone conversation. Then change roles and practise the conversation again:

Receptionist	**Caller**
Answer the phone	
	Ask to speak to Anne White
Ask who's calling	
	Give your name and company
Ask the caller to hold the line.	
	Say she's in a meeting.
Offer to take a message.	
	Give the message.
Repeat the message.	
	Say thank you and goodbye.
Say goodbye.	

2. Learn the following dialogue:

- Was that the telephone ringing?
- I didn't hear anything.
- I thought I heard it ring two or three times.
- Sometimes when windows are open, you can hear the neighbours' phone.
- Well, I'm expecting an important phone call, and I don't want to miss it.
- Is anything I should know about it?
- Not really. It has something to do with work and doesn't affect us here at home.
- Well, why don't you go ahead and do what you wanted to do outside. I'll call you if the phone rings for you.
- Thanks. I think I will. I've been waiting so long now I'm getting nervous. I need to relax outdoors.

3. Read the dialogue and fill in the gaps:

- Was that the telephone …… ?
- I didn't hear anything.
- …… thought I heard it ring …… or three times.
- Sometimes …… the windows are open, …… can hear the neighbours' …… .
- Well, I'm expecting an …… phone call, and I …… want to miss it.
- …… it anything I should …… about?
- Not really. It …… something to do with …… and doesn't really affect …… here at home.
- Well, …… don't you go ahead …… do what you wanted …… do outside. I'll call …… if the phone rings …… you.
-Thanks. I think I …… . I've been waiting so …… now I'm getting nervous. …… need to relax outdoors.

Words and expressions

Go ahead –go onward, proceed
Outside – outdoors

Conversation in context

Are the speakers husband and wife?
Where does the conversation take place?
How does one speaker volunteer to help the other?
Why is one speaker nervous?

Personal application

Do you get nervous waiting for phone calls?
Where do you usually relax?
How important is the telephone in your country?

Unit 3

Welcoming a visitor

The journey here	**The visitor**	**First impressions**
Did you have a good journey?	Where do you live?	What do you think of … (the new airport)?
How was your flight?	Which part of the	Are you here on business?

country/city is that?

Did you have any problems finding us?

How did you get here?

Work

What do you do?

Where do you work?

What are you working on currently?

Sports and leisure

What do you do at the weekends?

Do you play any sports?

Travel and holidays

Do you travel a lot?

Which countries do you visit?

Where did you spend .. (your last holiday)?

Is this your first visit to…

How long are you here for … ?

The weather

What was the weather like in…?

News

What's the latest news on … ?

Is there any news about …

Practice

1. Learn the following dialogue:

Dialogue 1

R – receptionist

J – James

R: Good afternoon, can I help you?

J: Good afternoon. My name's James Turner. I have an appointment with Richard Brown.

R: Oh, yes, Mr. Turner. Mr Brown is expecting you. Please take a seat and I'll tell him you're here… Mr Brown, I have Mr Turner in reception for you… OK. Mr Turner, Mr Brown will be with you in a moment.

2. James is in California on a visit. Read James's conversation with the receptionist and answer the questions:

A. Who does James want to see? B. What does the receptionist ask him to do?

3. James is meeting Wayne Brown for the first time. Which of these topics do people often talk about when they meet professionally for the first time? Underline your choices:

The visitor's journey	the town/place they are in
The weather	other towns/cities/countries
Sport	their salaries
Their jobs	Politics
Holidays	work/jobs in general

4. Learn the following dialogue:

Dialogue 2

W – Wayne

J – James

W: Hello, James! Welcome to California! It's good to meet you.

J: It' s good to be here at last.

W: Did you have any problems finding us?

J: No. My friend gave me directions in London last week. I got a taxi here.

W: Good. How was your flight?

J: There was a short delay in London, but the flight was fine. Fortunately, I slept on the plane, so I'm not very tired.

W: Glad to hear it. You've got a busy programme ahead. Let's discuss it over lunch. I booked a table for one-thirty. Do you like Mexican food?

5. Read their conversation again. Tick the questions Wayne asks James:

1. How did you get here?
2. Did you have any problems finding us?
3. Did you have a good journey?
4. How was you flight?
5. What was the weather like in London?
6. Is this your first visit to California?

6. Which of the following do you think are important to make a good conversation?

Tick your choices and add suggestions:

To be good at conversation you need to:

1. listen carefully
2. give only "yes" or "no" answers
3. show interest and ask questions
4. both listen and talk
5. answer questions and add extra information
6. only ask questions if you are the host
7. ……
8. ……

7. Here are some topics people often talk about in the first five minutes in a professional situation. Work in groups. Think of a few questions for each topic:

Conversation topics

The weather	(home and away)
The visit	(travel, reason for visit)
The visitor	(family, home life, leisure, interests)
First impressions	(likes and dislikes, food and drink)
Places, travel, and holidays	(city you are in, other)
Work	(general, current projects, future plans)
Sports and leisure	(interests)
News	(local or global)

8. Role-play. Work in pairs. One student is the host and the other student is the visitor. Choose from the topics in 5 and talk together for three minutes. Then change partners and roles.

Unit 4

Staying at a hotel

Booking a hotel

I'd like to book a *single* room for 4 April in your hotel
… double …

Arriving at a hotel

I have a reservation
What's the charge for the room?
How much is this service?
How long are you planning to stay?
I can offer you an outside room.
We can offer you a room facing the yard.

Making requests

Excuse me … (to get someone's attention)
Could I have a room for two nights? – Certainly, sir.
May I open the window? – Yes, of course.
Can I leave the meeting early? – I'm sorry, but …
I'd like a room, please.
Could I have an early morning call, at 6.30?
Could I have my bill, please?
Can I pay by credit card?
Could you confirm this in writing? – Yes, of course.

Can you do that by tomorrow? – I'm afraid I can't, because …

Practice

1. Learn the following dialogue:

- Why, Tom! What a nice surprise! What brings you out here?
- Oh, I had some time on my hands and thought I'd take a little drive in the country.
- And I wanted you to meet my friend, Richard.
- How do you do. It's a pleasure to meet you.
- It's a pleasure to meet you, too.
- Do come in, both of you. Can you stay for lunch?
- I'm afraid not. We want to see some other people this morning, so we can only stay for a few minutes.
- But you do have time for coffee, don't you?
- That would be nice.
- Please, sit down while I go fix the coffee. I won't be a minute.

2. Read the dialogue and fill in the gaps:

- Why, Tom! What a …… surprise! What brings you …… here?
- Oh, I had …… time on my hands …… thought I'd take a ...…. drive in the country. …… , I wanted you to …… my friend, Richard.
- How …… you do. It's a …… to meet you.
- It's …… pleasure to meet you, …… .
- Do come in, both …… you. Can you stay …… lunch?
-I'm afraid not. …… want to see some …… people this morning, so …… can only stay for …… few minutes.
- But you …… have time for coffee, …… you?
- That would be …… .
- Please, sit down while …… go fix the coffee. …… won't be a minute.

Words and expressions

- Time on my hands – leisure time; extra time
- Drive – short trip in an automobile
- Do come in – Please come in
- I'm afraid not – I don't believe so.
- I won't be a minute – I won't delay long.

Conversation in Context

- Who do you think Tom and Richard are?
- What's the reason for the visit?
- Why can't Tom and Richard stay for lunch?
- Is the coffee already fixed?

Personal Application

- Do you enjoy visiting friends in the country?
- Is lunch an important meal in your country?
- Is coffee traditionally offered to guests or visitors in your country?

3. Match a word from A with a word from B. What other hotel services can you think of?

A	B
shuttle	safe
car	pool
swimming	centre
business	rooms
electronic	bus
conference	park

4. Read this fax and answer the questions:

To: ……
Date: 5 September
Subject: Hotel Information

Dear Sir or Madam,

I would be grateful if you could send me some information about your hotel facilities. Could you also let me know the price for a single room with a bath for four nights at the beginning of November.

I look forward to hearing from you.

Yours faithfully,
John Brown.

1. Who does John Brown want to send this fax to?
2. Why is he sending the fax?
3. What does he want?

(a) to ask for information; (b) to reserve a room; (c) to change a reservation

4. What type of room does he want?

5. Somebody phones the Royal Hotel to reserve a room. Read the dialogue and complete the information about the caller:

Royal Hotel. Good morning.

Good morning. Could I reserve a room for the next week, for three nights, from Monday the first of November, please?

Certainly, sir. Three nights from Monday the first, you say?

Yes, that's right.

Single or double room, sir?

Single, please.

OK. Let me check. Yes, we have a room free. May I have your name, please?

It's Payton.

Sorry, that's P…A…Y…

P-A-Y-T-O-N. But the reservation is in the name of my company, Cambridge management Consulting. That's CMC.

OK. I've got that. Can you confirm your reservation in writing, please, sir?

I'm afraid I'm not in my office today. Can I fax you tomorrow?

Yes, of course. That's fine.

Could you tell me your fax number?

Yes, it's 6634561876.

OK. Thanks. Goodbye.

Good-bye.

Name……..……..	Date of arrival…….
Company…….	Date of departure……
Type of room……...	Confirmation by …….

6. Who asks the questions, the hotel receptionist (R) or the caller (C)?

1. Could I reserve a room for the next week?…
2. May I have your name, please?…
3. Can you confirm your reservation in writing?…
4. Can I fax you tomorrow?…
5. Could you tell me your fax number?…

7. Translate in writing and reproduce:

- Добрий вечір!
- Добрий вечір, сер!

- Мене звати Пітер Сміт. У мене заброньовано номер у вашому готелі.

- Хвилинку, будь ласка. Я подивлюсь у журналі реєстрації. Так, містер Сміт. У вас є бронь для двох чоловік на двомісний номер.

- А де знаходиться номер?

- На другому поверсі. Будь ласка, розпишіться в журналі реєстрації.

- Скільки коштує номер?

- 79 фунтів. Бажаєте телевізор у себе в номері?

- Так, хотілося б. У нашому номері є телефон?

- Так, телефони є у всіх номерах. Ви заповнили анкету гостя (arrival card)?

- Так.

- Добре, розпишіться ось тут. Ось ваш ключ, містер Сміт.

- Дякую.

8. Learn the following dialogue:

R: Oh, yes, Mr Turner. I remember.

J: I'd like to book a single room, for a colleague, for the 4th of April.

R: Let me see. Oh, I'm very sorry, Mr Turner, but we're fully booked on the 4th of April, because of the conference, you see.

J: Oh, what a pity!

R: You could try the other hotels in Verona.

J: Yes, I'll do that. Thank you for your help. Good-bye.

R: Good-bye.

9. Read the dialogue and complete the conversation:

R: Oh, yes, Mr. Turner, I remember.

J: I'd like to book a ……, for a colleague, for 4th of April.

R: Let me see. Oh, …….. Mr. Turner, but we're fully booked on 4th of April, because of the conference, you see.

J: Oh, ……..

R: You could try the other hotels in Verona.

J: Yes, I'll do that. …… Goodbye.

R: Good-bye.

10. Learn the following dialogue:

J: Good evening. My name is Turner. I have a reservation.

R: Yes, a single room for four nights?

J: Yes, that's right.

R: Could you fill in this form, please, and sign here? Thank you. Here's your key. Your room is on the first floor. The porter will take your luggage.

J: Thank you. Oh, could I have an early morning call, at 6.30, please?

R: Yes, certainly. Do you need anything else?

J: No, that's all, thank you.

11. James checks in at the hotel. Listen to his conversation with the receptionist and tick the phrases you hear:

- I'd like a room, please.
- I have a reservation.
- Could you fill in this form, please, and sign here?
- Here's your key.
- Here's your key card.
- Have you got a suitcase?
- The porter will take your luggage.
- Could I have an early morning call, at 6.30?
- Do you need anything else?

12. In pairs, practise asking and answering questions. Use the verb in brackets:

e.g. In a restaurant, you want the menu (bring).

A: Could you bring me the menu, please?

B: Yes, of course, here you are.

It's very hot and all the windows are closed (open).

You want a cigarette (smoke).

You want to know the time (tell).

You' re in a taxi with a colleague. You don't have your mobile phone (use).

In a restaurant, you want a glass of water (have).

Ask someone to phone you tomorrow morning (call).

You want to read a colleague's newspaper (look at).

You want a coffee. Ask your colleague (bring).

13. Make up your own dialogues on the topic "At the hotel":

Unit 5

At a Restaurant

Recommending

- What do you recommend?

- The … (seafood) is usually excellent here.
- I recommend the … (chicken).

Ordering

- I'll have ….
- We'll have … (smoked Scottish salmon).
- I'd like … (the roast Normandy pork).
- Could we have … (a bottle of mineral water)?

Offering

- Do have some more … (prawns).
- What about … (dessert)?
- How about … (some strawberries)?
- Would you like … (a coffee)?

Accepting

- Yes, I'd like that.
- Yes, that would be very nice.

Declining

- Thank you, but I couldn't eat any more.
- No, thank you.

Thanking and responding

- Thank you for a really excellent meal.
- Thank you for a lovely evening.
- Don't mention it.
- I enjoyed it very much, too.

Practice

1. Discuss these questions:

Do you think your national diet is a healthy diet?

Which "unhealthy" foods do you enjoy eating?

When do people in your country usually eat the biggest meal of the day? Do you think it's the best time to eat it?

2. Work in groups. Think of your favourite dish but don't say the name. Find out the favourite dish of each person in your group. Ask questions until you have the correct answer.

Examples: Is it a main course? How do you cook it?
Does it contain meat? Which other dish is it like?
What are the ingredients?

3. Work in groups. Prepare a menu for four foreign visitors to your country. The group consists of two Europeans (one is vegetarian), a Japanese, and an American. Suggest at least one starter, one main course, and one dessert.

4. Learn the following dialogue:

W = waiter, A = Ann, J = James

W: Good evening.

A: Good evening. I booked a table for two. The name is Benson.

W: Oh, yes, madam. Your table is over here.

J: This is a wonderful surprise, Ann. How did you know it was my birthday?

A: Oh, that's a secret. Anyway, I would like to discuss the trip to Hungary with you. You need an interpreter?

J: Yes, I do.

A: Well, let's order first.

J: It's a difficult choice. What do you recommend?

A: Well, the fish is usually excellent here. Let's see. I recommend the trout, or if you prefer meat, the Normandy pork.

W: Are you ready to order?

A: James?

J: Yes, I'll have king prawns as a starter, and then grilled trout.

A: And I'd like smoked salmon and the Normandy pork, please.

W: Certainly, madam. And what would you like to drink?

A: You choose.

J: OK. A bottle of Soave, please.

5. Ann and James are in a restaurant. Read their conversation again. Tick what they order on the menu and wine list.

6. Complete the conversation in the restaurant. Use the menu and wine list. You are a host and your friend is the guest.

You: Right. Let's order.
Friend: Hmm… It all looks good. What …… ?
Y: Well, for a starter …, and for the main course …… ?
F: Yes, …….
Y: And …… . To drink?
F: …….
Y: Yes, …… (later).
(…)
Y: Now, …… a dessert?

F: Thank you, but …… .
Y. …… sure? …… a coffee or a cognac?
F. …… (at the end of a meal).
(…)
F. Thank you …….
Y. …… .

7. Learn the following dialogue:

- Do you think we'll have time to stop for lunch soon?
- Why? Are you starving?
- Not quite, but almost. Don't forget I didn't eat any breakfast.
- It was your own fault. You preferred staying in bed another thirty minutes to eating breakfast.
- It seemed like a good idea at the time.
- I won't let you starve. I have to stop for gas in the next town anyway and you can eat then.
- Will that be long?
- Only about ten minutes.

8. Read the dialogue and fill in the gaps.

- Do you think we'll …… time to stop for …… soon?
- Why? Are you …… ?
- Not quite, but almost. …… forget I didn't eat …… breakfast.
- It was your …… fault. You preferred staying …… bed another thirty minutes …… eating breakfast.
- It seemed …… a good idea at …… time.
- I won't let …… starve. I have to …… for gas in the …… town anyway and you …… eat then.
- Will that …… long?
- Only about ten …… .

Words and expressions

To starve – to die of hunger
Anyway – in any case

Conversation in context

Where are the speakers?
Who are the speakers?
Why is one hungry?
What will happen in the next town?

Personal application

Do you prefer sleeping late to eating breakfast?
What time is lunch in your country?

Is breakfast a large meal in your country?

10. Work in pairs.

You are in a restaurant

Student AYou are the host/hostess.
Student BYou are the guest.
Practise the conversation. Then change roles:

Student A	**Student B**
Ask B what he/she would like.	
	Ask for a recommendation.
Recommend a starter/main dish.	
	Say what you would like.
Offer a drink: wine/beer.	
	Say what you would like.
(Later…)	
Offer a dessert/coffee.	
	Reply. Thank A.
Reply to thanks.	

10. Work in groups of three or more. You are in a restaurant. One person is the waiter/waitress, another is the host/hostess and the others are guests. Use the menu.

Ask the waiter/waitress and the host/hostess to recommend and describe dishes on the menu.

Unit 6

Recruitment

Practice

1. Read the job advertisement. Answer the questions:

- ✓ Why are "excellent interpersonal and presentation skills" important in this job?
- ✓ Would you like this job? Give your reasons.

Business development manager

The Trans-Europe Luxury train (TELT) is the most exciting new concept of this decade. It provides exclusive facilities for leisure and

corporate entertainment as it travels through the most beautiful parts of Europe.

We are looking for a creative, energetic person to market luxury travel VIP-tours to the leisure and corporate travel industry world-wide. You must have excellent interpersonal and presentation skills, experience of working in the leisure and/or corporate travel sector, and enjoy international travel and contact. Ideally, you are 27 – 35 years old, and fluent in English and two other European languages.

A*ttractive salary, car, and bonus. Please apply to:*
Euro-Executive search,
Box No 1329, rue de la Lui 187, 1049 Brussels.

2. Read the curriculum vitae from one of the applicants for this job, and extracts from his letter. Match the letter extracts to the relevant parts of his CV:

Curriculum vitae

Personal details	
Name	Michael Brown
Date of Birth:	2.10.66
Nationality:	Dutch
Address:	Van Baerlestraat 54,1070 Amsterdam
Tel. No:	020 6725331
Qualifications	
1987	Diploma in Hotel Management and Tourism, Swiss Hotel Management School, Montreux
Professional experience	
1993-present	Corporate Client Services Manager, Palace Hotels Group, Brussels. Responsible for marketing corporate client services of Group's five 4-star European hotels.
1990-1993	Manager, Capital Hotel, Amsterdam, 180 room, 4-star hotel with over 70 % business clients. Conference facilities for 100 people.
1987-1989	Assistant Manager, Hotel Mont Blanc, Chamonix, 150 room, 3-star hotel.
Languages	Dutch, English, German, French.

As you can see from my CV, I studied hotel management and tourism in Switzerland for three years…

After I obtained my diploma in 1987, I worked in France for two years and became fluent in French. This position gave me experience of the leisure sector of the hotel industry…

As manager, I was responsible for the planning and organisation of large conferences…

In my present job I have travelled a lot in Europe, and have made many important contacts in the corporate travel sector…

Recently I have been responsible for making promotional videos for our marketing programmes…

The results of my marketing programmes have been excellent. Corporate business in all the Group's hotels has increased significantly…

3. Underline the verbs in the letter extracts. Which tense does Michael use to describe his previous jobs? Does he use the same tense to talk about his current job?

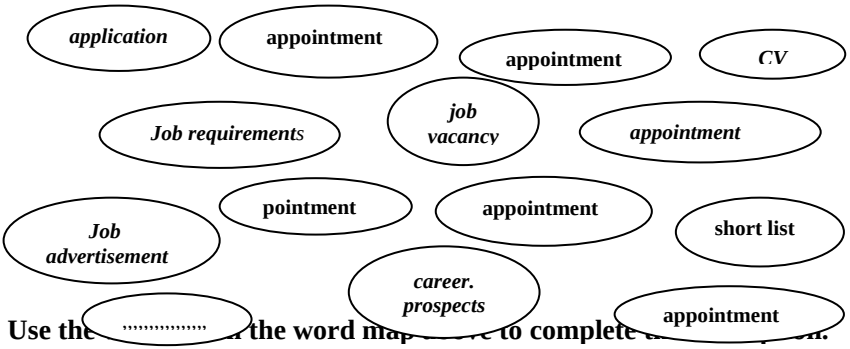
4. Work in pairs. You and your partner have both applied for the job at TELT. Interview your partner. Ask and answer the questions below. Add two more questions. If the answer is " Yes, I have", ask for more details:

Example: Student A. Have you ever worked in the hotel business?
Student B. Yes, I have.
Student A. When was that? Where did you work?

Yes/no	Details
1. work/in the tourist industry	……...
2. do/any marketing or sales?	……
3. give/any presentations?	…….
4. study/any European languages?	……..….
5. travel/on a luxury train?	…….
6. go/on a cruise?	…..…….....
7. organise/a conference or other activity?	…….....
8. want /to work in the luxury travel industry?	…….
9.	……..….
10.	……..….

5. Work in pairs. Complete the word map with the words from the box. Use your dictionary to check new words.

Candidate, experience, interview, job title, personal details, qualifications, salary, working conditions



6. Use the ,,,,,,,,,,,,,,,, the word map above to complete t… …n.

How a company fills a job vacancy

The company usually advertises the j…… v…… in a newspaper. The a…… usually gives the j……..… t……. and a description of the j……. r…… . It sometimes gives the s…… and describes the w…… c…… and c…… p…… as well.

The applicant usually sends in a letter of a…… and a c…… v…… or CV, which gives p…… d…… and lists qualifications and e…… . The company then makes a s…… l…… of the most suitable candidates and invites them for an i…… . The company then chooses the c…… and makes an a…… .

7. Read the text where a careers officer giving advice about job interviews. While you read, complete the list of ten guidelines on preparing for, and attending, an interview:

C = career officer

C: What makes a good interview? First, good preparation before the interview. Prepare yourself by following three simple gui… …deline number one is – … …s possible ab… example, you can get a lot of useful informatio… brochures, annual repor… …es, that sort of thing. … …the interview is with … …roup of people, and what their jobs are. It's very usefu… …iewers b… meet them. And three, make a checklist o… …want to as… interview. Remember an… …is a two-way process. Th… …any finds out as much as pos… …you find out as … …about the company.

So, that's what you need to do before the interview. Now, the interview itself. There are seven more guidelines to remember here. Guideline number four, dress smartly. A suit or something formal is best. Five, arrive in good time. Arriving late for the interview is the worst thing you can do. Rule number six, create a good first impression. Remember, first impressions are very important. Start the interview with a smile, a firm handshake, and a friendly manner.

Guideline number seven? Try to stay positive and relaxed during the interview. I know that's difficult. People don't usually feel relaxed during an interview, but remember, your body language gives the interviewer a lot of information about you. You want that information to be positive, not negative. Number eight – don't give only "Yes" or "No" answers. Talk freely about yourself, give reasons for your opinions, and explain why you are interested in the job. Nine – ask questions. Remember the checklist of questions you prepared before the interview. Show you're interested! Finally, guideline number ten: learn from the interview. Analyse your performance afterwards and think how you can improve the next time!

A. Preparing for the interview
1. Find out about the company
2. ……
3. ……
B. Attending the interview
4. Dress smartly
5. …….
6. …….
7. Try to stay positive and relaxed
8. …….
9. …….
10……..

8. Work in groups. Look at the list of ten guidelines. Answer the questions:

1. In your opinion, which guidelines are the most important?
2. Can you think of any advice to give a candidate?

9. Write your CV. Use Michael Brown's CV as a model. What other information can you add to complete yours?

CURRICULUM VITAE

Personal Details
Name ……
Address ……..
Tel. No ……..

Nationality	……
Qualifications	……
Professional	……
Experience	……...……...
	……..
Languages	……..
Hobbies	……

10. Project. Work in group. Your organisation needs a new employee. Decide what kind of person you want. Think about the personal qualities, qualifications, and experience the person needs. Prepare a list of questions to ask at the interview.

Unit 7

Opinions and suggestions / Agreeing and disagreeing

1. Learn the dialogue:

J = James, B = Brian

J: Sorry I'm late, Brian. The traffic was terrible…

B: Oh, don't apologise. I'm glad you could find time for a meeting.

J: OK, so you want to discuss how we celebrate our anniversary?

B: Yes. First, what do you think about having the celebration of our graduation from the University at my weekend house instead of at a restaurant?

J: Well, in my opinion, your weekend house is rather far for people to travel.

B: Yes, I agree. So I thought of hiring a minibus .

J: I think that's a nice idea!

B: Now, we need to decide on the programme. What do you think about this idea…

2. Answer the questions to the dialogue:

1. What celebration does Brian and James want to discuss?
2. Why does Brian want to hire a minibus?
3. What other event does Brian suggest they celebrate?
4. What does James think about this idea?

3. Read again and tick the phrases you read which correspond to:

Asking for opinions

What do you think about … ?

What's your opinion of … ?
How do you feel about … ?

Giving opinions

In my opinion …
I think …

Agreeing

I agree.
I certainly agree with that.
I agree completely.

Disagreeing

I'm afraid I don't agree.
I'm sorry, but I disagree.

4. Learn the dialogue:

B: OK, James. Then I suggest you give a talk on the time that passed

J: How about showing some slides?

B: Yes, let's do that. Right, that's a very full programme on the first day. Do you have any suggestions for the second day?

J: Why don't we make the second day more relaxing? Give people an opportunity to socialise, to get to know each other better. Why not start the day with a champagne breakfast?

B: Yes, and we could follow that with a treasure hunt in the garden, with a special prize?

J: Hmm, I'm not sure about that. What if it rains?

B: Don't worry, James. We have wonderful summers here. And then people can choose – there's tennis, swimming.

J: In fact everything for a great weekend of celebration!

B: That's right. And we finish with a big party in the evening. Well, James, I think we've agreed on everything. All we need now is to check the guest list, and make sure we haven't forgotten anyone …

5. Read the dialogue again and tick T (true) or F (false).

1. There is a busy programme on the first day……..
2. James thinks the treasure hunt is a good idea……
3. The last event on the programme is a dinner.……
4. Brian wants to make sure they've invited everyone.…….

6. Read the dialogue again and tick the phrases you read which correspond to:

Making suggestions

I suggest …
How about … ?
What about … ?
Why don't we … ?
Why not … ?
We could …

Accepting suggestions

Yes, that's a good idea.
Yes, let's do that.

Rejecting suggestions

Yes, but …
I'm not sure about that.
I'm afraid I don't like that idea.

Asking for suggestions

Do you have any suggestions for … ?
Any ideas on … ?

7. Match A and B to make suggestions:

A	**B**
I suggest we	invite some friends for dinner?
How about	spend next Sunday in the country?
What about	going away for a few days?
Why don't we	go to a concert in the evening.
Why not	go skiing next weekend.
We could	buying tickets for the music festival?

8. Discuss one of these topics in groups. Use phrases in 4 above to suggest solutions, and accept or reject the ideas of your classmates.

1. It's your University's 200th anniversary next year. Suggest ways of celebrating the occasion.

2. Your town wants to improve its leisure facilities. Suggest changes and improvements.

Unit 8

Social responses / Common expressions and idioms / Saying goodbye

Invitations and offers

Would you like to come to our barbecue?	I'd love to, but I'll be away then.
How about joining us tomorrow evening?	That sounds like a good idea.
Do you fancy another drink?	Thank you. I'd like some more wine.

Do try one of these canapés.	Thanks, but I couldn't eat anything else.
How do you like your coffee?	Black, one sugar, please./White, please.
Would you like a lift?	That's very kind of you, if it's no bother.

Responding politely

Oh, dear. I've just spilt some wine.	Never mind.
I'm afraid Ann couldn't come.	Oh, I'm sorry to hear that.
John sends his regards.	Thank you. Do give him mine.
I hope you have a good weekend.	Thanks. The same to you.
I hope the next programme goes well.	Thanks. I hope so too.
I'm afraid I didn't catch your name.	It's Helen. Helen Brown.
Do you mind if I open this window?	Not at all.

Common expressions

Talking of … (holidays, have you made any plans for next summer)?
By the way, … (we've managed to get tickets for the match on Sunday).
As I was saying … (their daughter has just started her own business).
That reminds me, … (I think he's making a big mistake).
As you say, … (the economic situation isn't getting any better).

Saying goodbye

I must be going now … (or I'll miss my train).	Thank you so much for all your hospitality.
I really must be getting back to the office.	Thanks very much for inviting me out to lunch. I've really enjoyed it.
I think I should get back to my hotel now … (as I'm leaving very early tomorrow).	Thank you for a really excellent meal.
I must be off.	Thank you very much for all your help. I really appreciate it.
It's been very interesting meeting you.	
I've enjoyed meeting you, too.	
I have enjoyed …	
I hope you have a good flight/trip/ weekend.	Thanks … (and the same to you). Thanks … (you too).

I hope to meet you again.	I hope so, too.
I'm looking/I look forward to … (meeting you again).	
Bye. See you on (5 May)	I'll be in touch soon.

Practice

1. Match the offers and invitations made by people at a party in A to the replies in B:

A	**B**
1. Maria, would you like another drink?	a) Yes, I'd love to see it. When are you going?
2. Do try one of these canapés. My friend made them. They're delicious.	b) That's very kind of you, if you're sure it's no trouble.
3. We're having a barbecue on Thursday evening. Would you like to come?	c) Did he? Then I must try one.
4. We're going to see that new musical next week. How about coming with us?	d) Oh, I'd love to but I'm afraid I'll be away on business then.
5. Would you like me to give you a lift back to your hotel after the party?	e) Thanks, Peter. I'd love some more wine.

2. Match the expressions in A with their uses in B:

A	**B**
1. Talking of (weekends, why don't you come and stay with us soon)?	a) To give an opinion, without being asked for one.
2. As I was saying, (their daughter has just started her own business).	b) To repeat and agree with what someone has said.
3. That reminds me, (I must get in touch with him again).	c) To introduce a new topic by linking it to a present one.
4. If you ask me, (I think he's making a big mistake).	d) To say something that the present topic has reminded you of.
5. As you say, (the economic situation isn't getting any better).	e) To take the conversation back to an earlier topic.

3. Work in pairs. Match the underlined idioms in A with their meaning in B.

A	**B**
1. "Yes, Peter and I were thrilled, of course, and Mike *is over the moon*".	a. Discuss work
2. "Peter tells me your presentation to the investors almost *went like a bomb*".	b. Something I can remember
3. "But we mustn't *talk shop* all evening! I want to hear about the new flat you're going to buy".	c. Was very successful
4. "Oh, what's the name of that famous Japanese restaurant in Piccadilly? It's *on the tip of my tongue*".	d. Extremely happy
5. "Yes, we work very well together. I think it's because basically *we're on the same wavelength*".	e. Hope our plans will be successful.
6. "Well, *let's keep our fingers crossed* that the next trip goes as well as the first one did".	f. Think in the same way
7. "I heard *on the grapevine* that our team is going to get award". Is it true?	g. Sounds familiar
8. "Now, the name Igor *rings a bell.* Yes, I think I met him at a party a few months ago."	h. As a rumour

4. Translate in writing and reproduce:

* - Я повинна йти – невідкладні справи. Було дуже приємно поспілкуватися з вами.

- Мені теж було приємно.
- Сподіваюсь, ми скоро побачимось.
- Будемо сподіватися на краще.
- До зустрічі!
- До зустрічі!

** - Дякую за чудовий вечір.

- Дякую, що прийшли.
- Переказуйте найкращі побажання своїм батькам.
- Дякую, я обов'язково перекажу.

5. Learn the dialogue:

- The time has come to say goodbye.
- So soon. It seems as if you just got here.
- I feel that way, too, but all good things must come to an end, they say.
- It certainly has been a pleasure seeing you again and renewing old memories.
- I've had a delightful time and I really appreciate your spending so much time showing me the sights.
- Oh. It was fun for me, too. It gave me a chance to get away from my routine and do something a little bit different.
- You'll be out to see us next year, then, as you promised?
- Oh, yes. Unless something catastrophic comes up, that's our present plan. We should be there some time early in September.
- We'll be expecting you.

6. Read the dialogue and fill in the gaps:

- The time has come to say goodbye.
- So soon. …… seems as if you …… got here.
- I feel …… way, too, but all …… things must come to …… end, they say.
- It …… has been a pleasure …… you again and renewing …… memories.
- I've had a …… time and I really …… your spending so much …… showing me the sights.
- …… . It was fun for …… , too. It gave me …… chance to get away …… my routine and do …… a little bit different.
- …… be out to see …… next year, then, as …… promised?
- Oh, yes. Unless …… catastrophic comes up, that's …… present plan. We should …… there some time early …… September.
- We'll be expecting …… .

Words and expressions:

- Sights – tourist attractions
- It was fun – it was enjoyable

Conversation in context:

- Who are the speakers?
- Why is one leaving?
- What have the speakers been doing together?

- What will happen next September?

Personal application

- "All good things must come to an end". Is there a similar saying in your language?
- Do you often visit friends and see the sights?
- When did you last visit and renew old memories?
- How often do you need to get away from your routine and do something different?

7. Now walk round and say goodbye to your group-mates. Give your reason for needing to leave now.

Unit 9

"Body language"

Practice

1. Discuss these questions:

1. Which nationalities in Europe usually use

a) a lot of gestures when they speak?

b) very few gestures when they speak?

2. In conversation, why might a north European move away from, and a south European move closer to, the person they are talking to?

3. Why might north Europeans visiting Mediterranean countries feel uncomfortable at the way people look at them?

2. Read the text to check your answers:

Understanding the "body language" of different nationalities – the way they use gestures, eye-contact, and touching to communicate without words – is an important part of communicating across cultures.

Gesture

If we compare the way different European nations use gesture, they fall into three groups. In the first group are the Nordic nations – the Swedes, Finns, Norwegians, and Danes – who use gestures very little. The second group includes nations such as the British, Germans, Dutch, Belgians, and Russians. They use some gestures, for example, when they are excited, or want to communicate over long distances, or to insult each other. The third group includes the Italians, Greeks, French, Spanish, and Portuguese. They use gestures a lot, to emphasise what they are saying, and to hold the other person's attention.

Personal space

People's sense of "personal space" – the distance that separates them from another person – also varies between people of different nationalities. What feels right for one nationality may feel uncomfortable for another. In countries such as Spain, France, Italy, and Greece, people stand close enough to touch each other easily, it's the so-called "elbow zone". In East European countries such as Poland, Hungary, and Romania, people stand a little more distant, "wrist zone", because they are close enough to touch wrists. In Britain, Holland, Belgium, Germany, and the Scandinavian countries, people prefer to stand further away from each other, and they do not generally touch, ("fingertips zone").

Eye-contact

Another cultural difference between nationalities is the amount of eye-contact between people. In countries where people stand close to each other, in elbow zone, eye-contact is more frequent and lasts longer. Mediterranean countries are "high-look" cultures whereas north European countries are "low-look" cultures. Children who grow up in a low-look culture learn that it is rude to look too long at another person. In a high-look culture, eye-contact, like physical contact and gestures, is a natural way of expressing your feelings and relating to other people. This explains why, for example, north Europeans visiting south European countries may feel uncomfortable at the way people look at them.

3. Do you agree with these observations?

4. Work in groups. Compare your answers to the following questions about body language in your country:

1. What gestures do you use to

- call a waiter in a restaurant?
- Attract attention of a friend in a crowd?
- Indicate "Yes" or "No"?
- Show surprise?
- Indicate that you don't understand?
- Show anger?

2. How much eye-contact is there between

- people talking to each other?
- Strangers passing each other in the street?

3. Do people

- stand close enough to touch when they are speaking?
- walk arm-in-arm in public?

- show affection in public (e.g. holding hands, kissing)?

5. Are these statements true about social customs in your country? Tick Yes, No or It depends:

a) People shake hands when they meet for the first time and when they meet after a long time. Colleagues don't shake hands every day.

b)In a professional situation people usually exchange business cards at a first meeting.

c) It' s very important to arrive punctually for a professional meeting.

d) Colleagues generally use first names at work.

e) People prefer to keep their work and private life separate. They don't usually socialise with colleagues outside working hours.

f) When you are invited to a person's home for a social occasion, it's usual to arrive ten to fifteen minutes late.

g) When people give flowers as a present, they give an odd, not an even, number, and without wrapping paper.

6. Describe any differences you have noticed in the body language of other nationalities.

Do you think any of the differences could cause a cultural misunderstanding?

Unit 10

Giving talks and presentations

1. Introducing the topic

This morning I'm going to … (talk about …)
Today I'd like to … (describe) …
The aim of my presentation this morning is to … (explain …)
I've divided my presentation into (three parts)
My talk will be in …
First, I'd like to ... (give you n overview of …)
Second, I'll move on to … (focus on …)
After that, we'll deal with …
Finally, we'll consider …

2. Referring to questions

Feel free to interrupt me if there's anything you don't understand.
If you don't mind, we'll leave questions till the end.

3. Introducing each section

So, let's start with … (objectives …)
Now let's move on to … (the next part …)
Let's turn our attention to … (the question of …)
This leads me to … (my third point …)
Finally … (let's consider …)

4. Summarising a section

That completes my … (description of …)
So, to summarise … (There are five key points …)

5. Referring backwards and forwards

I mentioned earlier … (the importance of …)
I'll say more about this later.
We'll come back to this point later.

6. Checking understanding

Is that clear?
Are there any questions?

7. Referring to visual information

This transparency/diagram shows …
If you look at this graph you can see …
What is interesting in this slide is …
I'd like to draw your attention to …(this chart …)

8. Referring to common knowledge

As you know …
As I'm sure you're aware …

9. Concluding

That concludes my talk.
That brings me to the end of my presentation.
If you have any questions I'd be pleased to answer them
I'll do my best
Thank you for your attention.

10. Dealing with the questions

That's a good point.
I'm glad you asked that question.
Can I get back to you on that later? I'm afraid I don't have … *(the information at present)*
I'm afraid I'm not the right person to answer that.

Practice

1. Presenting a company:

The text below is part of a presentation of a glass-making company. Fill in the blanks with the appropriate language:

Firstly, then, thirdly, secondly, if you look at, so to recapitulate, and to complete the picture, now I would like to describe, as you can see from the transparency, I'd like first of all to give you an overview

Good morning, ladies and gentlemen …… of our company. It is organised in three world-wide business lines …… , the Building products business, …… the Automotive products business and …… the Technical Glass products business.

…… the Building products business accounts for about half the Group's sales and has manufacturing operations in 19 countries. Its largest operation is in Europe and we also have major operations in North and South America and Australia.

The Automotive products business represents around 45 % of sales. Its organisation is sub-divided into two major units supplying original equipment and replacement glass. There are operations in 18 countries with the major presence in Europe and North America, and important operations in South America and Australia.

…… the technical Glass products business accounts for the remaining sales and is centred in Germany, the United Kingdom, the United States and Italy. It manufactures glass for the electronic and optical industry, precision mirrors and solar energy panels.

…… the country's structure …… the organisation chart, the various businesses report through their management boards to the chief executive …… , working from the corporate centre are Group functions – responsible for directing the businesses in their respective disciplines such as corporate affairs, environment and safety, finance, purchasing, legal and secretarial, human resources and internal audit. Technology is the only function that is organised centrally.

That's all I want to say at this point on company structure.

…… , we have three major business lines, Building products, Automotive products and technical Glass products. And there are various Group functions that report to the chief executive through the management boards. Are there any questions at this stage?

2. Describing a graph:

It is not necessary to describe every single movement on a graph; an outline of the main trends is enough:

This graph shows world gross domestic product growth from 1973 until the end of the 20th century. With the oil crisis in 1973, GDP growth fell sharply by 5 %, from 7 % in 1973 to 2 % at the end of 1975. It recovered in the following year before declining ever further in the next six years to reach a low point of 1 % in 1982. Over the next two years GDP growth rose steadily to reach 5 % but fluctuated in the following years before plummeting again in 1997. It reached a low point of 1.5 % before edging up slightly in 1998-99.

Unit 11

Advice and suggestions

Asking for advice and suggestions

What would you advice us to do?
suggest?
What do you recommend?
I'd like to hear your ideas on this.
Do you have any suggestions?
Do you think we should … (hire a consultant)?

Giving advice and suggestions

I'd recommend (that) … (we consult an expert)
suggest
I recommend … (getting expert advice)
suggest
My advice would be to ... *(ask a lawyer)*
If I were you I'd … (advertise on TV)
I think you should … (increase prices).
Have you thought of … (selling abroad)?
Why don't we … (delay production)?
How about … (asking local people)?
You could … (employ more staff).
It might be a good idea to ... *(do more research).*

Accepting

Yes, I'm definitely in favour of doing that.

Yes, I think we should do that.
Yes, that's an interesting idea.
Yes, that sounds like a good idea.
Yes, let's do that.

Rejecting

I'm sorry, but that's out of the questions.
I'm afraid I'm not very keen on that idea.
I'm not sure about that.
That's very interesting but ... *(it's too complicated*)
No, … (I don't think that will work).

Practice

1. Giving advice

Complete the second sentence so that it means more or less the same as the first.

1. You'd better hurry or you'll miss the plane.
If you ……
2. In my opinion, it would be better to sell your shares now.
My advice ……
3. It's not a good idea to drive through the city centre during rush hour.
Don't ……
4. Why don't you see a doctor if you're feeling ill?
You'd ……
5. I don't think it's advisable to tell her the bad news yet.
You'd ……
6. In my opinion, you ought to declare your overseas investments to the tax authorities.
If I ……

2. Read the statements made by several speakers and agree with them, using *so or neither:*

Example:
"I'm tired". So am I.
1. I didn't like Jurassic Park……
2. I can't stand people who are rude……
3. I should really exercise more……
4. I've never been to Fiji……
5. I enjoy going to the theatre……
6. I generally take a holiday in the summer……

3. Shades of opinion:

How do you feel about the following? Write your ideas with a suitable expression of agreement or disagreement, as in the example.

	I agree entirely	**I agree to some extent**	**I don't really agree.**	**I completely disagree.**
1. All men and women should do military service.				
2. There should be a single world currency.				
3.National industries should be protected.		Yes, I'd go along with that up to a point but you can't ignore market forces entirely.		
4. Smoking at work should be banned.				
5. Men and women should retire at 55.				

Unit 12

Business correspondence

Opening

Dear Sir

Madam

Mr Murphy

Mrs Brown
Miss Young
Ms White
George
Dr Green

When you don't know the receiver's name, use *Sir or Madam.*
For a man, use the receiver's family name with *Mr*.
For a married woman, use the receiver's family name with *Mrs or Ms.*
For an unmarried woman, use the receiver's family name with *Miss or Ms.*
For a close business contact or friend, use the receiver's first name.
For a doctor, use *Dr* and the family name.
Ms can replace *Mrs and Miss.* It doesn't indicate whether a woman is married.

Making reference

Thank you for your telephone call today.
With reference to your letter of 8 August …
Further to your letter of 30 September …

Apologising

I apologise for the delay.
not replying sooner.
I am sorry that I am not able to help you.

Explaining the reason for writing

I am writing to ask you…
enquire about…
inform you that…
confirm…

Agreeing to requests

I would be delighted to… / pleased to…

Giving bad news

I am afraid that …

Unfortunately …

Requesting

I would be grateful if you could …
We would appreciate it if you could …
Could you possibly …

Enclosing documents

I have pleasure in enclosing …

I am enclosing …

I enclose

Referring to future contact

I look forward to meeting you next month
I look forward to receiving your reply
I look forward hearing

Finishing

Please let me know if you have any questions.
Please contact us again if we can help in any way
Please contact us again if you would

from you soon.

like further information.

Closing
Yours faithfully
Yours sincerely
Best wishes.

NOTE!

When you open the letter with Dear Sir or Dear Madam, use Yours faithfully.

When you open the letter with the receiver's family name, use Yours sincerely.

For a close business contact or friend, use Best wishes.

Practice

1. Work in pairs. Read these statements about letters. Tick if they are T (true) or F (false):

Letter-writing quiz

1. If a letter begins with the receiver's name, e.g. *Dear Mr. Brown*, it closes with *Yours sincerely* and the signature.

2. If you wrote to Peter Brown and wanted to use his first name, you would write *Dear Mr. Peter*.

3. If you did not know if a female correspondent was married or not, you could write *Ms*, instead of *Miss* or *Mrs*.

4. If you wrote a letter to Mrs Susan Lambert, you would open with *Dear Mrs Susan Lambert*.

5. The abbreviation for a doctor is *Dr.*, e.g. *Dear Dr. Bell*.

6. If you did not know the receiver's name, you would close the letter with *Yours faithfully* and the signature.

7. In the USA, the date 5/8/96 on a letter means 8 May 1996.

8. It is correct to begin a letter with *Gentlemen* in the USA.

2. Work in pairs. Match the phrases to the function they express:

Functions	**Standard phrases**
1. Making reference	a) Could you possibly … ?
2. Explaining the reason for writing	b) I am afraid that …
3. Requesting	c) With reference to your letter of 20 February …

4. Enclosing documents	d) Please find enclosed …
5. Confirming	e) I am writing to enquire about …
6. Giving bad news help in any way.	f) Please contact us again if we can…
7. Apologising	g) We apologise for the mistake…
8. Thanking	i) I am pleased to inform that…
9. Referring to future contact	j) I look forward to seeing you next month…
10. Finishing the letter	h) Thank you very much for sending…

3. Complete the letter with suitable phrases.

Institute of Energy Conservation
51 St. John's street, Manchester M1 4DF

Prof. J. Penn
19A Gloucester St
Faringdon
OXON OSN 7JA

21 March
Dear John

…… to ask you if you could make a presentation of your latest research at our annual conference next month.

…… a provisional programme, to give you an idea of the main topics, and details of the conference hotel.

…… not writing to ask you earlier, and I very much hope that you will be able to talk to us.

…… .
With best wishes
Yours sincerely

Dr Marcus Lerner
Director

Unit 13

American English

To express possession, British people often say *have got*

British	***British/American***
I've got a German car.	I have an Italian car.
Have you got a fax machine?	Do you have any children?
Yes, I have.	Yes, I do.
No, I haven't.	No, I don't.

NOTE!

The difference is only in the Present Simple. The re is no difference in other tenses. When we use the verb have for an action, there is no difference between American and British English.

British/American
I have an English lesson every week.
Do you have coffee for breakfast? - Yes, I do.
- No, I don't.

Present Perfect/Past Simple

Where British English uses the Present Perfect, American English often uses the Past Simple.

British	**American**
I've just finished the report.	I just finished the report.
Have you seen her yet?	Did you see her yet?
I haven't finished the work yet.	I didn't finish the work yet.
We've already met.	We already met.

Prepositions

British	**American**
at the weekend	on the weekend
five minutes past two	five minutes past/after two
ten minutes to six	ten minutes to/of six
write to me	write me
meet someone	meet with someone
stay at home	stay home
Tuesday to Saturday	Tuesday through Saturday
visit somebody	visit with somebody

Dates (written)

British	American
2.11.94 – 2 November 1994	11/2/94 – November 2 1994

Dates (spoken)

British	American
She started work on the second of November, nineteen ninety-four.	She started work on November second, nineteen ninety-four.

Vocabulary

British	**American**
flat	apartment
car	automobile
taxi	cab
chemist's	drug store
lift	elevator
autumn	fall
tap	faucet
ground floor	first floor
motorway	freeway
petrol	gas
post	mail
cinema	movie theater
trousers	pants
wallet	pocketbook
railway	railroad
toilet	rest room
return ticket	round trip ticket
pavement	sidewalk
tube/underground	subway
holiday	vacation

Practice

1. If you saw words spelt in the following way would you expect the writer in each case to be British or American? Why?

1. labor
2. centre
3. hospitalized
4. a movie theater
5. favour
6. thru

2. You are going on holiday to the States. Which of the words do you think it would be most important for you to know? Which of the words would a person travelling with a baby might well need to know?

3. Translate the following into British English:

1. I had a blow-out.
2. Pass me the cookies.
3. It's in the closet.
4. Open the drapes.
5. We've run out of gas.
6. Our bags are in the trunk.
7. One-way or round trip?
8. Buy a one-way ticket.
9. We're leaving in the fall.
10. I hate waiting in line.

4. Who do you think is most likely to be speaking, an American or a British? What would someone who speaks the other variety have said instead?

1. I lost my way at the big intersection just south of the city.
2. Why are there always so many shopping trolleys left in the car park?
3. Cross the road at the pedestrian crossing, then turn left.
4. You can't drive any further; you'll have to back up, the street is very narrow.
5. You'll see the petrol station just after the flyover on the A56.
6. Once you get on to the Interstate, it will only take you two hours to get there.
7. The bookstore is kitty-corner to the Chinese restaurant.
8. There's a creek at the end of the trail. It's about three miles from here.

5. Can you avoid some of the most common confusions arising between British and American speakers? Try the following quiz:

1. Where would you take (a) an American visitor (b) a British visitor who said they wanted to wash up – the kitchen or the bathroom?
2. Which would surprise you more – an American or a British man Telling you that he wanted to go and change his pants?
3. You have just come into an unknown office block. If (a) an American (b) a British says that the office you need is on the second floor, how many flights of stairs do you need to climb?
4. If (a) an American (b) a British asks for a bill, is he or she more likely to be in a bank or a café?
5. Would a man wear a vest under or over his shirt (a) if he is a British (b) if he is from the USA?

6. Match the words on the left with their equivalent on the right, and write US for American English and UK for British English:

1. dumpster ……	skillet ……
2. ground ……	skip ……
3. frying pan …...	stove ……..
4. cooker ……	earth ……...
5. gasoline ……..	pantihose …...
6. antenna ……...	petrol ……...
7. tights ……..….	yard ……
8. luggage ……	aerial ……..…
9. sidewalk …….....	baggage ……..
10. garden ……	pavement ……

7. Fill in the gaps with a British English (UK) word or an American English (US) word:

1. Do you want to check in that bag or take it on board as …… ? (UK)

2. Zodiac Airlines wishes to announce the arrival of Flight 347 from San Francisco. This flight will …… momentarily. (US)

3. …… class is always the cheapest way of flying. (US)

4. Passengers are reminded that …… luggage is restricted to one item only. (UK)

5. …… class passengers may now board. (UK)

6. Let's cross the …… here. There's more traffic further down. (US)

7. You should always use the …… to cross the street. (UK)

8. After the …… , look for a sign saying 'International Airport'. (US)

9. I left the …… Running and nearly flooded the kitchen. (UK)

8. Do you know any other examples of American English? Make a list of your own.

Part 4

Texts for Discussion

Text 1

1. Read the text and give its main idea:

The planet Mars has always captured the human imagination. There is its redness. We know now that the colour comes from chemical reactions that long ago locked up Mars's oxygen in reddish minerals on its surface, causing the "rusting" of the planet. To the ancients, the red colour meant only one thing: blood. From the earliest times, Mars – named for the Roman god of war – has been associated with bloodshed. Even the astronomical symbol for Mars, a circle with an arrow pointing at 2 o'clock, is supposed to represent a shield and a spear.

As astronomers acquired telescopes, Mars mythology grew. It was the Italian astronomer Giovanni Schiaparelli who, in 1877, produced the most lasting bit of Martian folklore. He saw what he took to be long, thin, unnaturally straight lines on the Martian surface. He called them "canali", a word that can translate into English either as "channels" or "canals". Unfortunately, the latter translation was used, and the canals of Mars were born. Obviously if there were canals, there had to be canal builders, so once more Mars was peopled with all manner of intelligent life forms!

In 1965 Mariner 4 sent back our first close-up pictures of the Martian surface. Not only were there no canals, but Mariner 4 and the spacecraft that followed revealed a planet that was a largely cratered, apparently lifeless

desert. We have subsequently learned that Mars is home to Olympus Mons, the largest volcano in the entire solar system, and to a canyon system stretching for almost 3,000 miles around the Martian equator. The atmosphere is extremely thin and made up almost entirely of carbon dioxide. The surface is cold, almost never getting above freezing even at the summertime equator.

2. Answer the questions to the text:

1. Are myths about Mars widely believed today?
2. What are the sources of information about Mars?
3. What did Schiaparelli see in his telescope?
4. What is the translation of the word "canali"?
5. When were the first pictures of the Martian surface sent to the earth?
6. What did Mariner 4 find?

Text 2

1. Read the text and give its main idea:

The killer sea waves known as tsunamis are so quiet in their approach from afar, so seemingly harmless, that until recently their history has been one of surprise attack.

Out in the middle of the ocean, the distance between tsunami wave crests can be 100 miles and the height of the waves no more than three feet: mariners can ride one and suspect nothing. At the shoreline, the first sign is often an ebbing of the waters that leaves fish stranded and slapping on the bottom. However, this is not a retreat but rather a gathering of forces. When the great waves finally do strike, they rear up and batter harbour and coast, inflicting death and damage.

These seismic sea waves – or tidal waves, as they are sometimes called – bear no relation to the moon or tides. And the word "tsunami", Japanese for "harbour wave", relates to their destination rather than their origin. The causes are various: undersea or coastal earthquakes, deep ocean avalanches or volcanism. Whatever the cause, the wave motion starts with a sudden jolt like a whack from a giant paddle that displaces the water. And the greater the undersea whack, the greater the tsunami's devastating power.

In 1883, Krakatoa volcano in the East Indies erupted, and the entire island collapsed in 820 feet of water. A tsunami of tremendous force ricocheted around Java and Sumatra, killing 36,000 people with walls of water that reached 115 feet in height.

In 1946 a tsunami struck first near Alaska and then, without warning, hit the Hawaiian islands, killing 159 people and inflicting millions of dollars of damage. This led to the creation of the Tsunami Warning System, whose centre in Honolulu keeps a round – the clock vigil with the aid of new

technology. If the seismic sea waves are confirmed by the Honolulu centre, warnings are transmitted within a few hours to all threatened Pacific points.

2. Answer the questions to text:

1. What is the main idea of this text?
2. What is the origin of the word “tsunami”?
3. What were the results of Krakatoa volcano eruption?
4. What led to the creation of the Tsunami Warning System?

Text 3

1. Read the text and give its main idea:

Many people are unaware of how many of the products we use every day come from petroleum and natural gas. In the United States each family of four uses more than two tons of petroleum products annually. That’s almost 1200 lb of chemicals each year for every man, woman, and child in the United States – a staggering total of 225 billion pounds of chemicals from petroleum, and to a lesser extent, natural gas.

Of the vast amount of petroleum and natural gas we consume, more than 90 percent is burned as fuels. Only about 5.5 percent is used for the manufacture of petrochemicals by the chemical industry. These petrochemicals vary widely in their functions and include such products as drugs, detergents, rubber, paints, fertilisers, dyes, perfumes, explosives, food preservatives, artificial sweeteners, and agricultural chemicals. Finally, about 1.5 percent of the oil and natural gas is used as raw material for plastics. This small percentage translates into the production of billions of pounds of polymers that yield many different and useful products.

In post-World War II years, the United States was flooded with domestic and imported items of extremely low cost, low quality, and limited lifetime. This led to the image of “cheap plastics” with low durability. Today, however, the image of plastics has changed. Plastics perform an extremely broad range of functions, from heart valves and artificial kidneys to ski boots, non-stick surfaces, super glues, and spaceship parts, and they complete with natural products in durability. No other materials except plastics could perform all these different functions.

Certainly the use of polymer plastics will increase. One can expect to find more applications in home construction and furniture because of the unlimited design freedom of plastics. Plastics will be used more in drink containers and food packaging. The 700 billion gallons of liquids consumed each year in the United States will find their way to the consumer more and

more in plastic bottles. Diseased or malfunctioning parts of the body will be replaced by specialised plastic components to a greater degree. We are indeed becoming a plastic society.

2. Answer the questions to the text:

1. What does this passage mainly discuss?

A. production of petroleum and natural gas

B. plastics and plastic products

C. new uses of plastic in automobiles

D. the versatility of petrochemicals

2. What is the percentage of petroleum and natural gas used in production of plastics?

3. Were plastic products cheap in the US after World War II?

4. Why does the author believe that the use of plastics in home construction and furniture will increase?

Text 4

1. Read the text and give its main idea:

Glass, in one form or another, has long been in noble service to humans. As one of the most widely used of manufactured materials, and certainly the most versatile, it can be as imposing as a telescope mirror the width of a tennis court or a small and simple as a marble rolling across dirt. The uses of this adaptable material have been broadened dramatically by new technologies: glass fibre optics – more than eight million miles – carrying telephone and television signals across nations; glass ceramics serving as the nose cones of missiles and as crowns for teeth; tiny glass beads taking radiation doses inside the body to specific organs; even a new type of glass fashioned of nuclear waste in order to dispose of that unwanted material.

On the horizon are optical computers. These could store programs and process information by means of light – pulses from tiny lasers rather than electrons. And the pulses would travel over glass fibres, not copper wire. These machines could function hundreds of times faster than today's electronic computers and hold vastly more information. Today fibre optics are used to obtain a clearer image of smaller and smaller objects than ever before – even bacterial viruses. A new generation of optical instruments is emerging that can provide detailed imaging of the inner workings of cells.

The secret of the versatility of glass lies in its interior structure. Although it is rigid, and thus like a solid, the atoms are arranged in a random

disordered fashion, characteristic of a liquid. In the melting process, the atoms in the raw materials are disturbed from their normal position in the molecular structure; before they can find their way back to crystalline arrangements the glass cools. This looseness in molecular structure gives the material what engineers call tremendous "formability" which allows technicians to tailor glass to whatever they need.

Today, scientists continue to experiment with new glass mixtures.

2. Answer the questions to the text:

1. What uses of glass do you know?
2. What new technologies using glass can you name?
3. What can you say about optical computers?
4. What is the secret of glass versatility?
5. What happens in the melting process?

Text 5

1. Read the text and give its main idea:

Paper is different from other waste produce because it comes from a sustainable resource: trees. Unlike the minerals and oil used to make plastics and metals, trees are replaceable. Paper is also biodegradable, so it does not pose as much threat to the environment when it is discarded. While 45 out of every 100 tonnes of wood fibre used to make paper in Australia comes from waste paper, the rest comes directly from virgin fibre from forests and plantations. By world standards this is a good performance since the world-wide average is 33 per cent waste paper. Governments have encouraged waste paper collection and sorting schemes and at the same time, the paper industry has responded by developing new recycling technologies that have paved the way for even greater utilisation of used fibre. As a result, industry's use of recycled fibres is expected to increase at twice the rate of virgin fibre over the coming years.

Already, waste paper constitutes 70 % of paper used for packaging and advances in the technology required to remove ink from the paper have allowed a higher recycled content in newsprint and writing paper. To achieve the benefits of recycling, the community must also contribute. We need to accept a change in the quality of paper products; for example stationery may be less white and of a rougher texture. There also needs to be support from the community for waste paper collection programs. Not only do we need to make the paper available to collectors but it also needs to be separated into

different types and sorted from contaminants such as staples, paperclips, string and other miscellaneous items.

There are technical limitations to the amount of paper which can be recycled and some paper products cannot be collected for reuse. These include paper in the form of books and permanent records, photographic paper and paper which is badly contaminated. The four most common sources of paper for recycling are factories and retail stores which gather large amounts of packaging material in which goods are delivered, also offices which have unwanted business documents and computer output, paper converters and printers and lastly households which discard newspapers and packaging material. The manufacturer pays a price for the paper and may also incur the collection cost.

2. Answer the questions to the text:

1. How is paper different from other waste products?
2. Is paper biodegradable? If yes, what does it mean to nature?
3. Why is waste paper collection encouraged?
4. What is the percentage of waste paper in paper production?
5. Are there any technical limitations to the amount of paper recycled?

Text 6

1. Read the text and give its main idea:

The northern lights, or the aurora borealis, is one of nature's most dazzling spectacles. When it appears, there is often a crackling sound coming from the sky. A huge, luminous arc lights up the night, and this arc is constantly in motion. Sometimes, the brilliant rays of light spread upward in the shape of a fan. At other times, they flash here and there like giant searchlights, or move up and down so suddenly that they have been called "the merry dancers". Farther north the aurora frequently looks like fiery draperies which hang from the sky and sway to and from while flames of red, orange, green, and blue play up and down the moving folds.

According to scientific measurements, this discharge of light takes place from 50 to 100 miles above the earth. But it doesn't reach its greatest brilliance at the North Pole. It is seen at its best around the Hudson Bay region in Canada, in northern Scotland, and in southern Norway and Sweden. It may sometimes be seen even in the United States as it flashes across the northern sky.

Science is still not certain regarding exactly what these lights are and what causes them. But it is believed that the rays are due to discharges of electricity in the rare upper atmosphere. The displays seem to centre about the

earth's magnetic poles, and electrical and magnetic disturbances often occur when the lights are especially brilliant.

2. Answer the questions to the text:

1. What do the northern lights look like?
2. At what distance from the earth do the northern lights take place?
3. What is the cause of the northern lights?
4. Where are they best seen?

Text 7

1. Read the text and give its main idea:

People often make the same mistake with trees. That they make with kittens and puppies: they forget they will grow into something much larger with quite different needs. All too often, beautiful young trees are planted in such close proximity that some will almost certainly fall victim to the axe before they reach maturity.

With planting a tree in a small area, you need to think about the size of its roots just as much as its branches – and maybe even more so. In many trees the root run in each direction is the same as the height. Thirsty roots can also draw so much water from the soil that the ground shrinks and subsides – potentially taking your property with it. And that's not all: if a tree which has been extracting lots of moisture from the soil is removed, the ground can expand with the unaccustomed moisture, with potentially serious knock-on effects for your foundations.

As roots have built-in water sensors, another hazard is that they are attracted to drains. There is no stopping a determined root in search of nourishment and it will force its way through any pipe joint, causing disastrous blockages. You will also be liable should roots stray and prove similarly hazardous to adjacent properties. So buying the right-sized tree for the situation is money-wise as well as good gardening.

2. Answer the questions to the text:

1. What kind of mistake do people make with trees?
2. What do you have to keep in mind while planting a tree?
3. Do trees have built-in water sensors?

Text 8

1. Read the text and give its main idea:

National parks, nature reserves, protected areas and sites of special scientific interest are an important part of the natural landscape in most countries. Their habitat and terrains vary massively from tundra and glacier parks in the north to wetlands in Europe, steppes in central and eastern Europe, and prairie grasslands and deserts in other areas. Virtually all kinds of landscape are protected somewhere. And these protected areas are important for the variety of plant and animal life they harbour: caribou, bears, wolves, rare types of fish and birds.

But these areas are under threat from a recent peril – global climate change. No amount of legislation in any one country can protect against a world-wide problem.

If climatic change is severe, and in particular if the change is happening as quickly as it is at the moment, then the boundaries of the park no longer make much sense. A park that was designated as a protected area 90 years ago may suffer such change in its climate that the nature of it changes too. It will no longer contain the animal and plant life that it did. So the area which once protected, say, a species of reindeer or a type of scenery, will have changed. In effect, you lose the thing you were trying to protect. This effect has already been seen in Canada, where parks which once contained glaciers have seen the glaciers melted by global warming.

The problems are manifold. First, it is difficult or impossible to predict which areas are most in need of help. Predicting climate change is even more unreliable than predicting the weather. Secondly, there is a sense that governments in most areas are apathetic towards a problem which may not manifest itself until long after that government's term of office has come to an end. Third, and perhaps most important, even in areas where there is both the political will and the financial muscle to do something about the problem, it is hard to know what to do.

Certainly, climate change is not going to go away overnight. It is estimated that fossil fuels burnt in the 1950s will still be affecting our climate in another 30 years, so the changes will continue for some time after that. If we want to protect the remnants of our wild landscapes for future generations, the impetus for change must come from the governments of the world.

2. Answer the questions to the text:

1. Does every country have protected areas or national parks?
2. Can countries protect their parks by changing their laws?
3. Has Canada, more than any other country, felt the effects of global warming?

4. Are fossil fuels burnt in the 1950s still affecting our climate?
5. How long will it last?

Part 5

Progress Check

Progress Check 1

This unit reviews all the main language points from units 1-4. Complete the exercises

1. Present Simple and frequency adverbs.

Interview a partner about work habits. Tick your partner's answers in the questionnaire below.

Example:

Student A: How often do you arrive at the university before your classmates?

Student B: Usually.

Are you a workaholic?

How often do you…	**usually**	**often**	**sometimes**	**rarely**
1. arrive at the university before your classmates?				
2. leave the university after normal hours?				
3. take work home at weekends?				
4. think about work when you are at home?				

5. make tiring business trips?
6. continue working when you are very tired?

Now add up the score and tell your partner the results:

Usually = 5, often = 4, sometimes = 3, rarely = 2, never = 1.

24-30	Be careful! You are becoming a workaholic!
16-23	Try to relax a little more.
9-15	You are well organised.
6-8	You are very relaxed!

2. Frequency adverbs:

Make true sentences about your lifestyle. Add five more sentences. Use the frequency adverbs in the box.

Example: I sometimes go out to restaurants in the evening.

1. watch the news on TV
2. meet friends at weekends
3. go jogging
4. get up before 7 a.m.
5. read a newspaper
6. study English
7. take work home
8. go to bed after midnight
9. drive to work

3. Present Simple questions and short answers:

Work in pairs. Match A and B below. Then prepare questions in the Present Simple to ask your partner. Use short answers.

A	B
Speak	letters in English
Play	meetings or conferences
Write	business trips
Make	English on the phone
Give	a sport
Work	professional literature
Read	Presentations
Attend	flexitime

Example:

Student A: Do you speak English on the phone at work?

Student B: Yes, I do.

4. Present Simple, Present Continuous, or Past Simple?

Complete the text with the correct form of the verb in brackets.

Travel Writer on Safari

Jane Allen is a travel writer. She …… (write) travel articles for international magazines. Last year she …… (move) to Montreal, Canada, where she …… (live) with her husband and teenage son, but she …… (not be) at home very often because she …… (spend) more than 50 % of her time travelling! At present, she …… (do) research for an article on safari holidays in Africa. She …… (visit) organisations which …… (specialise) in adventure holidays, and she …… (interview) people who …… (have) experience of safari holidays. Two months ago, she …… (fly) to Africa and …… (spend) five weeks travelling around Kenya.

When she …… (be) there, she …… (join) a group of people on a safari holiday and …… (talk) to them about the experience.

She …… (enjoy) the African trip but she …… (not like) the mosquitoes! Jane really …… (love) travelling because she …… (meet) all kinds of people. What …… she …… (enjoy) after months of travelling? She usually …..….. (like) to spend a few days at home after a trip, doing absolutely nothing at all.

5. Past Simple questions:

You asked a friend about her holiday. She gave you these answers. What were your questions?

Example: With Iberia.
Which airline did you fly?

1. To Majorca.
2. Only for five days.
3. No, it wasn't. I first went there two years ago.
4. At a hotel on the beach.
5. Yes, it was delicious. And the wines were very good, too.
6. I did a lot of sunbathing and swimming.
7. It was very good. Sunny and hot every day.
8. Yes, I did. I lost my passport!

6. Which city do you think is the most exciting in the world? Give your reasons. Work in groups.

7. List five features which make a city good for a holiday. Compare your lists with other groups.

8. Read the article about Sidney. Does Sydney have any of the features you listed in 7?

Sydney

Sydney is the biggest, liveliest, and most cosmopolitan city in Australia. It has one of the world's loveliest harbours, and its Opera House is as famous as the Statue of Liberty. Sydney is also famous for its many beaches, where you can swim, surf, sail, and sunbathe. The nearest, Bondi Beach, is less than fifteen minutes' drive away. It's not surprising that one in five Australians chooses to live in Sydney. Few cities in the world offer a better climate, or a healthier and more enjoyable lifestyle.

Today it's difficult to imagine the view of Sydney Harbour without the Opera House. Its adventurous design by a Danish architect won an international competition in 1957. Many people think it's the most spectacular building of this century. It took nineteen years to complete and the final cost was fifteen times more than the original estimate. Inside there are five theatres, the largest with seats for 2,700 people.

Sydney's other famous landmark is a lot older than the Opera House. The Harbour Bridge opened in 1932. One of the best views of the harbour and the city is from the top of its south-east tower. There's an even more impressive view from the 305 metre high Sydney Tower.

The Rocks is Sydney's most historical part, where the British landed in 1788 to build the colony of New South Wales.

It has the city's oldest buildings, and its shops, museums, and pubs make it one of the most popular tourist attractions. At night, sitting at one of its waterfront cafes with the lights of Sydney Harbour all around you, it's easy to feel you're in one of the most exciting cities in the world.

9. Match the word with its explanation:

cosmopolitan	- an area of water next to the land where the water is calm, so that ships are safe when they are inside it;
attraction	- what you are able to see or the whole area that you can see from somewhere, especially when it is very beautiful or impressive;
view	- the highest part of something;
harbour	- the basic unit for measuring length;
landmark	- a cosmopolitan place has people from many different parts of the world;

metre	- something that is easy to recognise and that helps you to know where you are;
top	- something interesting or enjoyable to see or do.

10. Insert the missing letters:

a.....raction, hi...tori...al, ...ar...ours, s..…f, spe…ta…ular, exc…t...ng, i...pre…sive, be……hes, …useu…s, p…b…, i…a…ine, s……l, en…o…able, c…smop…litan, t…w…r, b…ildin…s, to……ist, ce…tur…, l……d, li…ht…, sur…ris…ng, c…l…ny.

11. Quick test. Comparative and superlative adjectives:

What are the comparative and superlative forms of these adjectives? Add more examples.

1. few
2. lively
3. crowded
4. good
5. suitable
6. much/many
7. far
8. bad
9. enjoyable
10. little
11. big
12. easy

12. Introductions and greetings:

Work in pairs. Give a suitable response to these introductions and greetings.

1. How do you do.
2. Pleased to meet you.
3. Please call me John.
4. How's the family?
5. How are you?
6. How's life?
7. It was very nice meeting you.
8. Have a good trip back..

13. Welcoming a visitor:

You are welcoming visitors from another country. Think of five questions to ask the visitors. Ask about their journey, the reason for the their visit, their job, their home town, and their first impressions**.**

14. Telephoning: making contact.

Complete this telephone conversation.

A. Good morning. "Elle" magazine.

B. Good morning. …… Mr. Ross, please?

A. Who ……, please?

B. …… James Turner.

A. Hold …… please, Mr. Turner. I'm sorry. Mr. Ross ……. Can I …….. ?

B. Yes. …… to call me? My number is 0171 986 5053.

A. Yes. Mr. Turner …… .

B. Thank you. Good-bye.

15. Telephoning: leaving a message.

Work in pairs. Practise these telephone calls. Make up two more calls. Change roles.

Situation 1	
Student A	**Student B**
Phone Ian Bell. Your number is 567667.	Ian Bell is in a meeting. Take a message.
Situation 2	
Phone the Sales Director of Whole Foods Ltd. Your number is 774884.	You work for Whole Foods Ltd. The Sales Director is on holiday. Take a message.

Progress Check 2

1. Mass and count nouns. Some/any/a lot of/much/many

Five of the sentences below have a grammatical mistake. Find the mistakes. Write the correct sentences:

1. Could you give me an information, please?
2. Would you like some wine?
3. I didn't buy much fruit.
4. He gave me some useful advice.
5. The news is not very good.
6. I did a lot of exercises at the gym.
7. How many money did you spend?
8. I haven't got some paper.
9. Many people attended the conference.
10. He has much experience in marketing.

2. Work in pairs. Find out about your partner's home town. Ask about:

restaurants **Examples:** Is/ are there any … ?

historical buildings
parks
industry
open space
unemployment
nightlife
famous sights
good hotels
traffic jams

Is there much … ?
Are there many … ?
Yes, there is/are some/a lot.
No, there isn't much.
Yes, there is/are.

3. Work in pairs. Ask your partner questions in the Present Perfect Simple with *ever.*

If your partner answers *Yes, I have*, ask for more details. Add three more questions:

Example

Student **A** Have you ever been to America?
Student **B** Yes, I have.
Student **A** When was that? How long was the flight?

Student A	**Yes**	**No**	**Details**
Ask student B			
1. (be) on a holiday in the mountains?			
2. (have) an accident?			
3. (miss) a train?			
4. (study) in another country?			
5. (lose) something valuable or important?			
6. …….. ?			
7. …….. ?			
8. …….. ?			
Student B			
Ask student A			
1. (be) on a city sightseeing holiday?			
2. (have) a bad experience			

while travelling?			
3. (study or work) all night?			
4. (meet) a famous person?			
5. (want) to live in another country?			
6. …….. ?			
7. …….. ?			
8. …….. ?			

4. Find the grammatical mistake in each of these sentences. Write the correct sentence.

1. I haven't seen him since ages.
2. How long ago have you had a holiday?
3. How long are they married?
4. I've had my present job since a long time.
5. Have you ever gone to Canada?
6. How many tests have you been had today?
7. She's changed her job a month ago.
8. How long are you studying at the university?
9. He's changed jobs twice last year.
10. She studies Japanese since 2001.

5. Complete the text with the correct form of the verb in brackets.

Michael Brown …… (be) at Ultra Tech Inc. Since he …… (leave) college. Since he …… (join) the company, he …… (work) in three different departments. In his present job in the Sales Department, he usually …… (travel) to Switzerland every two or three months. Last year he …… (to be) also responsible for Southern Europe, and he …… (go) to Spain and Italy on business five times. He …… (not go) to Spain so far this year. At the moment, he …… (be) in Thailand on holiday with his wife and daughter. It …… (be) their first trip; they …… (never, visit) the Far East before. They …… (fly) from London last week and they …… (visit) many of Bangkok's interesting sights this week.

6. Complete these sentences with the Present Perfect Simple or Continuous:

1. You …… (drink) six cups of coffee since lunch-time!
2. We …… (drink) coffee all afternoon.
3. She …… (type) all the letters and I …… (sign) them all.
4. He …… (play) in every match this season.

5. They look very tired. They …… (walk) for hours without a break.
6. She …… (lose) her pen. She …… (look) for it all day.

7. Work in pairs. Practise making and changing arrangements:

Student A	**Student B**
Phone B and ask for a meeting.	Say "yes". Ask when.
Suggest a day.	Apologise and say "no".
	Suggest another day.
Say "yes".	End the conversation.
Student B	**Student A**
Phone A to change the meeting date.	Ask when B is free.
Suggest two dates.	Choose a date.
Say "yes". End the conversation.	

8. Work in pairs. Write a short conversation for each of the following situations. Practise the conversations with a partner:

Situation 1.

Mike phones Ann to invite her to the theatre. She accepts.

Situation 2

Ann phones Mike to invite him to a party. Mike declines and gives the reason.

9. Work in pairs. Plan some activities for next week. Suggest, accept, or reject the following activities:

Student A	**Student B**
1. a walk in the country	1. a concert
2. a visit to an exhibition	2. a party for a friend's birthday
3. a boat trip on the river	3. dinner at a good restaurant
4. a game of tennis	4. a theatre visit

Example:

Student A: How about going to a museum on Monday afternoon?

Student B: Yes, fine. What about having an Italian meal in the evening?

10. Work in pairs. Practise asking and giving opinions. Agree or disagree with your partner's opinion. Ask about:

1. a famous film star	4. a capital city
2. a sport	5. a national cuisine
3. a holiday destination	6. a famous politician

Example	**Student A**	In my opinion, Paris is the most interesting capital city in Europe. What do you think?
	Student B	I don't agree. I think Amsterdam is.

Progress Check 3

1. Fill in the appropriate idiom:

at a loose end, put an end to, light at the end of the tunnel, brought to an end, dead end, odds and ends, got the wrong end of the stick, to make ends meet

1. This box contains lots of …… (small worthless articles).
2. They should finally …… their constant arguing (stop).
3. I find it hard …… , because my salary is so low (to afford everyday expenses).
4. The discussions had come to a(n) …… , and negotiations were therefore stopped (no way out).
5. You shouldn't give up, because there is always a …… (hope).
6. The meeting was …… because it was getting nowhere (stopped).
7. You've ……; I didn't cause the accident. He did! (misunderstood).
8. When all the work was finished, we found ourselves …… (not knowing what to do).

2. Choose the correct item:

1. You must …… harder if you want to reach Olympic standards (train, instruct, master, discipline).
2. The twins are so …… that I cannot tell them apart (like, alike, identical, same).
3. Many soldiers were …… during the Second World War (damaged, broken, spoiled, wounded).
4. The seating …… of the stadium is 10,000 (ability, capability, skill, capacity).

3. Match the idioms with the definitions:

1. Famous people are always in the public eye, and are followed around by reporters wherever they go.
2. We climbed up the mountain to get a bird's eye view of the surrounding countryside.
3. Robert is the apple of his grandmother's eye. You can see how much she loves him.
4. Is Jane on holiday? I haven't set eyes on her for weeks.
5. When we visited the fairground, the children were all eyes.

6. An eye for an eye, a tooth for a tooth is a saying in the Old Testament.
7. Could you keep an eye on my flat while I'm away?
8. She always wears extremely eye catching clothes!
9. Angela won't go out with you. She only has eyes for Rob.
10. A bacterium is too small to be seen with the naked eye.

a. a view of something from a high position
b. The person somebody loves most
c. To see without the use of a microscope/telescope
d. To see somebody
e. Attractive/noticeable
f. To take revenge
g. To look after something
h. Totally fascinated
i. To be in love with somebody
j. Well known (especially by the media)

4. Read the text below. Use the word given in capitals at the end of each line to form a word that fits in the space in the same line:

Hawaii

The Hawaiian islands …… are a tropical paradise.	real
Palm trees, …… views and breathtaking sunsets	scene
add up to many people's ideal holiday. At the ……	fame
resort of Waikiki you'll find a wide …… of restaurants,	vary
bars and night-clubs, with prices ranging from ……	fair
reasonable to very …… By day the beaches are buzzing	expense
with …… and, as the sun sets, nightlife of every ……	active
can be experienced. If you're not keen on busy beaches,	describe
then there's the …… of taking one of the many	possible
excursions around the islands or even snorkelling in the ……	fascinate
bays. The final …… on how you spend your time is yours**,**	decide
but few people ever regret going there.	

5. In this little story, there are some nouns that should be plural but are not. Change the text where appropriate:

I decided that if I wanted to be a pop star I'd have to leave home and get lodging in London. I finally got a room, but it was on the outskirts of the city. The owner didn't live on the premise, so I could make as much noise as I liked. The acoustic in the bathroom was fantastic, so I practised there. I made so much noise I almost shook the foundation! I went to the

headquarter of the Musicians' Union, but a guy there said I just didn't have a good enough look to be famous. Oh well, never mind!

6. Fill in the correct word derived from the words in brackets:

When the channel tunnel opened, many people had high …..… (expect). Instead of travelling for up to 3 hours on the sea, the tunnel appeared to be an …… (attract) alternative. In reality, however, the channel tunnel project ran into some …..…. (predict) problems. Nobody had imagined that there would be a power …..…. (fail), leaving the passengers stranded in the tunnel for hours. …..… (doubt), these problems will have been overcome in a few years' time, satisfying passengers' …… (require) for an enjoyable journey.

7. Fill in *speak, talk, say or tell* in the appropriate form:

A. Could you …… me the time, please?

B. Paul is capable of …… for himself.

C. Could you …… up, please?

D. When I …… that I want you to be quiet, I mean it!

E. Nobody likes him because he …… nonsense.

F. He likes to …… about politics all the time.

8. Choose the correct item:

a. She was given the …… of working in Hong Kong (occasion, opportunity, luck, fortune).

b. We had difficulty in …… the boat round the rocks.(driving, leading, touring, steering).

c. You need to fulfil some basic …… before being admitted to this university (requirement, desires, requests, inquiries).

d. My club …… new members every spring (hires, engages, recruits, dismisses).

e. The coastline near here is very …….. ; there are lots of rocks and cliffs (smooth, even, crude, rugged).

9. Fill in the correct prepositions, then choose any five of them and make sentences:

1. to be …… isolation; 2. to come …… an end; 3. to be keen …… sth/sb; 4. to be obsessed …… sth/sb; 5. to be confident …… sth 6. to be famous …… sth; 7. to give an interpretation …….. sth; 8. to die …….. a duel; 9. to die …… an illness; 10. to be dying …… sth; 11. to aim ..……. sth/sb; 12. to travel …… bus/plane; 13. to be ……

a bus/plane; 14. to be …… a taxi/car; 15. to be away …….. sth; 16. to be ignorant …… sth; 17. to be …..…. the left/right; 18. to be …… the top/bottom; 19. …… the end (= last); 20. …….. the end (= finally); 21. to be tired …… sth/sb; 22. ..……. a way; 23. to be filled ..……. sth; 24. to head ……... ; 25. to dream ……. sth.

10. Match the idioms with the correct definition:

1. If you go out in the rain without an umbrella, you'll *get soaked to the skin*.

2. Oh, you gave me such a fright! I almost *jumped out of my skin*..

3. He's such *a skinflint*; he never buys anyone a birthday present.

4. She has to *have thick skin* to be able to ignore all his nasty comments.

5. Although Ann is *nothing but skin and bone*, she is about to start a new diet.

6. Beauty is only *skin deep*; Sue is attractive but she has a nasty character.

a) to be unaffected by criticism
b) on the surface
c) to become very wet
d) to get a terrible scare
e) person mean with money
f) extremely thin

11. Read the text and think of the word which best fits each space. Use only one word in each space:

The Isle of Wight

The Isle of Wight is a small island just …… the south coast of England near the towns of Portsmouth and Southampton.

Queen Victoria loved the island …… much that she had Osborne House built, which has not changed at …… since the days when she used to visit with her huge family …… tourist attractions include Butterfly World, where, …… the name suggests, visitors can see a large range …… butterflies, and two zoos. In summer it is usually warm and sunny …… for holidaymakers to enjoy the miles of clean beaches.

Alternatively, for those …… want to be out of doors but don't like sunbathing, the Isle of Wight is an excellent place for cyclists. There are numerous little paths which lead …… picturesque villages all …… the island. Newport, the island's capital, is also …… a visit. It is a busy little town with …… of small specialist shops.

…… the beginning of August, there is the most famous yachting week …… the world, which takes …… at Cowes. During that week Cowes is full …… carnival atmosphere and every bar and restaurant is packed.

12. Read the text below and decide which answer A, B, C or D best fits each space:

Valley of the Kings

The valley of the Kings is a small (0) …… located four miles from modern Luxor, in Egypt, where (1) …… 1539 and 1078 BC, some of the world's most (2) …… kings were buried. The valley is well-known for its (3) …… art, although not all the tombs are decorated. Archaeologists believe that there are still many things (4) …… in the valley and until recently (5) …… were still going on. However, Egyptian (6) …….. have decided to close down the digs in order to (7) …… them. The reason this decision has been taken is because the tombs are under serious (8) …… caused by the weather, man and animals. For example, floods have severely damaged the tombs and have knocked down pillars and destroyed wall paintings. Also, the (9) …… winds that sweep through the valley are extremely harmful to the tombs as they make the paint (10) …… quicker. Tourists are also to (11) …… . They visit the tombs in large (12) …….., touching the walls and using cameras, although this is (13) …… . Another problem is that the tombs are (14) …… to thousands of bats which cause a great (15) …… of damage to the ancient wall paintings.

0. A. area	B. part	C. setting	D. landscape
1. A. in	B. at	C. between	D. before
2. A. public	B. efficient	C. trustworthy	D. famous
3. A. awful	B. spectacular	C. handsome	D. pretty
4. A. buried	B. immersed	C. concealed	D. covered
5. A. tests	B. excavations	C. expeditions	D. exams
6. A. bosses	B. authorities	C. presidents	D. leaders
7. A. protect	B. care	C. defend	D. keep
8. A. warning	B. risk	C. threat	D. hazard
9. A. sturdy	B. intense	C. firm	D. strong
10. A. fade	B. faint	C. weaken	D. dull
11. A. accuse	B. answer	C. blame	D. charge
12. A. groups	B. sets	C. teams	D. bunches
13. A. banned	B. outlawed	C. restricted	D. forbidden
14. A. nest	B. home	C. house	D. residence
15. A. share	B. number	C. deal	D. portion

13. Underline the correct item:

1. My boss wants me to work **even/very** harder.
2. The manager was **very/much** pleased with the sales figures.
3. His parents were not **much/very** happy when he decided to join the army.
4. The wind is **much/too** strong for sailing today.
5. He was **much/very** annoyed when I crashed his car.
6. The police officer suddenly began to look **much/very** more serious.
7. The spectators were **more/most** pleased with their team's win.
8. They'll give us **farther/further** details as soon as they receive them.
9. Pam drove **very/much** quickly down the lane.
10. Can you drive **very/any** faster, please? I'm in a hurry.

14. For questions 1-15, read the text and decide which word A, B, C or D best fits each space:

Transport

The love 0) …A… between the Americans and their cars has been going on for decades, but new 1) …….. shows that they might be getting too much of a good thing. It 2) …… that the dream of freedom and independence, which the car represents, is 3) …… into a nightmare for people there.

The problem is caused by urban sprawl, which is the uncontrolled 4) …… of cities. Low-density housing is being built on the 5) …… of urban areas, and is swallowing up farmland and forests. As a(n) 6) …… people in America must drive five times farther than Europeans on a daily 7) …… .

Another problem is that public transport in US mega-cities is not popular. In fact, only 3 % use public transport to get to work, as 8) …… with 25 % of Europeans and up to 67 % of Asians. 9) …… the wasted hours spent commuting, the fumes 10) …… by unnecessary car travel is seriously 11) …… air quality in American cities. There is a solution, 12) …….. . Redeveloping city centres to allow more people to live in them, close to where they work, would go a long 13) …… towards solving the problem. Such a 14) …… change would be expensive, but a major change to city planning is certainly 15) …… , if Americans are to " get off the streets" and find the time to enjoy their wealth (New Scientist).

0. A. affair	B. relation	C. relationship	D. connection
1. A. investigation	B. examination	C. research	D. study

2. A. seems	B. looks	C. thinks	D. presents
3. A. becoming	B. getting	C. converting	D. turning
4. A. evolution	B. growth	C. increase	D. extension
5. A. cliffs	B. edges	C. ends	D. tips
6. A. conclusion	B. outcome	C. result	D. effect
7. A. principle	B. ground	C. base	D. basis
8. A. compared	B. contrasted	C. different	D. opposed
9. A. apart	B. besides	C. except	D. despite
10. A. composed	B. built	C. developed	D. produced
11. A. worsening	B. fading	C. shortening	D. weakening
12. A. although	B. even	C. however	D. still
13. A. distance	B. way	C. length	D. extent
14. A. forceful	B. insignificant	C. drastic	D. harsh
15. A. necessary	B. enquired	C. inquired	D. demanded

15. Fill in *there* or *it*:

1. It's very cold today; …… has been snowing all night.

2. ……..'s a policeman at the door; …….. seems that the neighbour has complained about the noise.

3. ……..'s holiday tomorrow so no one has to go to work.

4. Let's go by taxi to the cinema; ……..'s much too far to walk.

5. ……'s a letter on the doorstep; ……'s for you.

6. This report you've shown me is confusing …… appears to be a mistake in it.

7. …… are many changes to be made to this report but …… shouldn't take us too long.

8. …… is my privilege to introduce our distinguished guest speaker.

9. ……'s nothing much on TV tonight …… 's a pity we don't have a video recorder.

10. …… is a shame you weren't able to come to the party. …… were lots of people there.

16. Complete the sentences using the words in bold. Use two to five words:

1. Everyone thanked me except Paul.

Person *The only person who didn't thank me was Paul.*

2. She said: " I dislike French films and so does Jim".

Neither She said that …… French films.

3. If you decorate the house on your own, it will be cheaper.

Yourself If you …… , it will be cheaper.

4. I take twenty minutes to drive to work every morning.
Drive It's …… to my work every morning.
5. Try to watch your behaviour at the wedding reception.
Yourself Try …… at the wedding reception.
6. I don't like being alone in the house at night.
By I don't like …… in the house at night.
7. There are only a few people who can speak Welsh.
Not There …… can speak Welsh.
8. She left the shop with another person's bag by mistake.
Someone She left the shop …… by mistake.
9. We spent all afternoon cleaning the living room.
Whole We spent …… the living room.
10. We don't know much about supernatural phenomena.
Knowledge We have …… about supernatural phenomena.

17. Use one of the given introductory verbs to report the following sentences:

Invite, threaten, remind, promise, beg, offer

1. "Would you like me to do the shopping?" offer She offered to do the shopping.
2. "I will bring the money I owe you tomorrow." ……
3. "If you don't work harder, I'll sack you." ……..
4. "You can use my phone whenever you want." ……...
5. "Please, please, come with me!" ……..……
6. "Don't forget to check the papers." ……..……
7. "Why don't we go to Paris this summer?" ……..…….

18. Use the words in capitals to form a word that fits in the space in the same line:

Forests

One third of …… Europe is covered by trees.	west
This sounds ……, but most of these trees were planted	impress
recently and are no …… for the ancient natural	replace
forests. Europe's ancient woods are …… habitats for	suit
a large number of …… species. Fast-growing	endanger
modern forests, however, are dark and …… to birds	inviting
and animals. The World-wide Fund for nature recently	

held a seminar to increase …… for a new campaign	public
called "Forests for Life". The …… wants to introduce	organise
bans on trade in …… made from wood from these	produce
forests. By the year 2008 they hope to have built	
up a network to provide …… for	protect
…… areas and help restore damaged forests.	exist

19. Complete the sentences using the words in bold. Use two to five words:

1. She wasn't well enough to go to school that day.
I'll She …… to school that day.
2. We found the concert rather disappointing.
Were We ……... by the concert.
3. Tom is too short to join the basketball team.
Enough Tom ……... to join the basketball team.
4. I prefer to eat out rather than cook my own meals.
To I prefer …..…. My own meals.
5. The boy could hardly understand the instructions.
Difficulty The boy …… the instructions.
6. My parents let me go to the party.
Was I …… to the party.

20. Read through the text and think of the word which best fits in each space. Write only one word in each space:

Pollution

With 0) *the* combination of deadly car fumes and an alarming amount of industrial toxins, Mexico City is by 1) …… the most polluted city in the world. It is so polluted in fact, 2) …… it has broken the World Health Organisation's safety levels.

3) …… to lack of pollution control, little has 4) …… done to improve the air quality of Mexico City. The 30,000 industrial factories that operate within the city have 5) …… regulations whatsoever regarding the release of toxic waste 6) …… the atmosphere. This, combined 7) …… the one million barrels of leaded petrol used 8) …… day, has caused pollution levels to sky-rocket.

The city's dilemma is made 9) …… by its high altitude. Situated on a 7,000 foot high plateau and surrounded 10) …… mountains and volcanoes, the pollution has no 11) …… of escaping and becomes trapped.

Mexico's government is worried 12) …… the pollution, but sadly, the efforts that have been made so 13) …… such as only allowing cars to operate for six 14) …… of seven days, are simply 15) …… enough.

21. The following adjectives describe people's personality characteristics:

lazy, intelligent, practical, reliable, patient, lively, unstable, generous, boring, optimistic

Choose the most appropriate one to fill in the sentences:

1. Mary is a very …… person. You can always count on her to do what you ask her to.
2. He tends to be …… . His mood is likely to change at any time.
3. He is a very …… person; he puts in very little effort at work.
4. Mick can often be …… ; he has a tendency to repeat the same old stories.
5. She has a very …… outlook on life; she never expects anything to go wrong.
6. The teacher is very …… with her students; she always explains things several times.
7. The little boy is so …… that he can do his big brother's homework.
8. My uncle is very …… ; he always gives money to charity.
9. My son is very …… ; he is full of energy and high spirits.
10. My husband is very …… . He repairs everything around the house.

22. Choose the word which fits best:

1. If you stop eating cakes and sweets, you will be able to …… your weight (*check, examine, control, test*).
2. My father had to …… his intake of meat, because he suffers from high cholesterol (*reduce, weaken, shrink, shorten*).
3. After eating, blood sugar levels …… (*rise, raise, arise, grow up*).
4. When I finish Medical School, I will have …… my goal (*managed, acquired, achieved, succeeded*).
5. Before eating a banana you have to …… the skin (*remove, delete, extract, take out*).
6. He' s always …… animals with love and care (*treated, behaved, used, operated*).
7. My granny has …… teeth (artificial, fake, false, counterfeit).
8. Due to their continuous training, runners usually have …… athletic bodies (*bony, skinny, thin, lean*).

23. Use the word in capitals to form a word that fits in the space in the same line:

For an …… holiday destination, few cities can	excite
compare to New York. From …… . Fifth Avenue to	fashion
the run-down and …… ghettos of the Bronx, New	fright
York is a city of …… contrasts. However	spectacle
…… it may seem, it is worthwhile wandering the	alarm
streets on your own to get a feeling for the ……	characterise
areas of the city. Of course it is …… to use your	advise
common sense. You should be …… when	caution
approached by strangers, and always keep in mind	
that violence is …… and that acting	prevail
…… is the best protection against attack.	afraid
Keeping this in mind, you can be assured of having	
a …… time.	marvelous

24. Study the table:

Prepositions of time

at	**in**	**on**
at 9.30	in the morning / evening / afternoon	on Thursday
at X-mas /Easter	in the Easter/Christmas holiday(s)	on Easter Sunday
At noon/night/ midnight	in October (months)	on Christmas Day
at lunch /dinner/ breakfast(time)	in (the) winter (seasons)	on Friday night
at that time	in 1995 (years)	on January 18th
at the moment	in the 20th century	on a winter afternoon
(on the weekend: Am. (English)	in two hours (two hours from now)	on that day

25. Look at the table above and fill in the correct prepositions:

Health and Fitness

You'll arrive at the health farm 1) …… Thursday, that's 2) …… . June 15th. You should try to arrive 3) …… the morning if you can. 4) …… the first day we won't be doing a lot, just resting, so you can go and lie by the pool if you like. You'll be expected to get up early 5) …… .

Friday morning 6) …… about 7 o'clock. Your day's programme will be given to you 7) …….. breakfast. 8) …….. the summer we have a lot more guests and so 9) …… that time you'll be assigned to your different groups. Lunch will be served 10) …… noon, and 11) …… lunch you'll be given an opportunity to meet the other trainers. There'll be a rest period 12) …… the afternoon followed by a swim and sauna for those who are interested. We like to have a bit of a dance 13) …… Friday night, so bring your party clothes! We will be conducting a period of meditation and relaxation 14) …… the weekend, but all the trainers will be around to keep you busy. Don't forget that we are also running a second session 15) …… August and another one 16) …… Christmas for those who are interested.

26. Think of the word which best fits each space. Write only one word in each space:

Italy

Italy is a fascinating country, a wonderland of (0) …… man-made and natural beauty. No (1) …… where you go in this small but varied country you (2) …… find something to interest, intrigue (3) …… delight you. The big cities such (4) …….. Milan, Rome and Naples are filled (5) …… ancient monuments, Renaissance palaces and some of the best examples (6) …… modern architecture in the world, while smaller cities like Pisa and Siena are well (7) …… exploring for sights: the famous Leaning Tower, churches and museums, not to (8) …… their parks, gardens and surrounding countryside. Because Italy covers (9) …… a large area (10) …… north to south, its climate is (11) …… varied as its sights. (12) …… in the north you can find lakes, forests and mountains, the far south is a paradise of sunshine, warm sea and sandy beaches. And of course everywhere (13) …… is the delicious food, which is a good reason for visiting Italy even (14) …… you have decided to ignore every (15) …… attraction of this wonderful country.

27. Use the words in capitals to form a word that fits in the space in the same line:

The Benefits of Exercise

Working full-time can be a very …… experience for	stress
most people; long hours and the pressure to be ……	success
In a …… society both contribute to the build-up of	compete
anxiety. If you're feeling …… , there's no better	nerve

way to relax than to exercise. However, many people return from work too …… to move. People are criticised for being lazy and …… , and for watching too much television which is not …… to our health. Taking regular exercise can be both relaxing and …… and people who feel healthy often also feel more …… . You don't need to be especially …… to take up a sport; simply choose one that is …… to your character.	exhaust active benefit pleasure confidence energy suit

28. Choose between the past simple and present perfect:

Stella McCartney, Paul McCartney's daughter, *joined/has joined* the troubled Paris fashion house Chloe barely a year ago. It *took/has taken* her just one year to reverse its fortunes. Previously Chloe *was/has been* virtually invisible as a major force in the world of fashion. But almost single-mindedly she *transformed/has transformed* Chloe into the most talked about fashion brand in the world. She *increased/has increased* sales fivefold. Paris *didn't see/hasn't seen* anything like it since the young Yves St. Laurent *took/has taken* the city by storm 30 years ago.

When she *was/has been* appointed it *was/has been* clear she *knew /has known* what she *had /has had* to do. "I want to bridge the gap between the consumer and the press. At the moment fashion is just sort of stuck in the middle".

So far, Stella *stuck/has stuck* to her philosophy of avoiding outrageous and uncommercial catwalk creations. She *kept/has kept* to the simple philosophy of designing clothes that she or her friends would want to wear.

29. Fill in *since* or *for:*

I have wanted to visit France ever …… I entered college. I have been learning about French history and culture …… the past two years, and have recently been looking into the possibility of studying in France …… one month this summer. I have dreamed about strolling in the grounds of the Palace of Versailles …… so long. …… began my studies, I have become aware of the significant contributions that French leaders, writers, artists and scholars have made to the world. My professor has been travelling to France …… over 20 years and he is still fascinated by its beauty and culture. …… his first trip in 1965, he has written many books about his travels there which are highly regarded all over the world.

30. Think of the word which best fits each space. Write only one word in each space:

Stonehenge

Stonehenge is a prehistoric monument (… on) an area of land called Salisbury Plain – about seven miles north of the town of Salisbury in England. Stonehenge consists …… a series of stone settings arranged …… a circle and is considered one of the …… complex stone circles in the world. Built as a religious temple, Stonehenge was first recorded …… John Aubrey in the 17th century, although excavation of the site did not begin …… 1919. Research has shown that there were three main periods of construction, beginning around 1800 BC and finishing …… the 15th century BC, when Stonehenge …… completely reconstructed. The fact that the monument is …… large implies that many people must …… worked together in a team to help build it. There has always been controversy …… the exact function of Stonehenge. Although …… is no doubt that it had religious importance, it was also known to have a special significance …… regard to the sun. Records show that the site was used …… a place of worship during the summer months and especially …… June 21st, the longest day of the year. Today, Stonehenge is a major tourist attraction and is still believed to have a spiritual force, …… to this day.

31. Fill in the gaps with the appropriate word related to *natural disasters*:

1. Forest fire, earthquake, drought, tidal waves, famine, flood
2. Many people went without water for days during the …… .
3. …… often occurs in hot countries, where it is difficult to grow food because there is no rain.
4. In a …… you should leave your house in case it collapses.
5. The …… was so severe that whole houses were washed away.
6. When he saw the glow in the hills, Jim phoned the police to report a(n) …. .
7. …… have been known to crash over coastal towns, destroying them completely.

32. Complete the following text with the correct derivative of the word in bold:

Protecting our lives

Future generations will thank us for tackling our …… pollute

problems now, in order to avoid further …… disasters.	environment
The continual …… of the world's forests and wood-	reduce
lands is …… to both animal and plant life. Many species	harm
Are now …… and unless something is done to protect	danger
them, they may be …… with extinction. Ocean exploration	threat
has aided …… in their search for new medicines	science
by discovering other …… of plant and animal life.	vary
…… research may even provide a cure for AIDS! Therefore	add
it is …… important that the world's forests, woodlands	vital
and oceans are protected for future …… to enjoy.	generate

33. Think of the word which best fits in each space. Write only one word in each gap:

Most people dream …… becoming rich and famous, but is that …… success is really about? It is a fact that many people who have …… fame and wealth are far …… happy with their lives. They worry constantly …… their money and reputation. They are rarely satisfied …… what they have. Singers may lose their popularity, athletes …… injured and can no …… perform well, and rich business people may lose their money …… making risky deals. The best …… to be happy with oneself and one's life is to reconsider what success really is. All people must realise that human values and qualities are …… more important …… material things. A job no matter …… humble, which is done with interest and care, is …… as much as instant fame. Being close to your family and having friends you can trust and depend …… also make for a happy, successful life. These are the things that really count, and give you the right to consider …… a success.

34. Read the text. Some lines are correct and some have a word which should not be there, cross that word out:

The Loch Ness Monster

0 I spent the whole of last summer with my aunt
00 who she lives in a small cottage near Loch Ness, in
1 Scotland. It was very exciting because I thought I might
2 get a chance to see the monster, so the every day I
3 went for fishing on the Loch, always remembering to take
4 my camera with me – just in the case.
5 It was a Sunday afternoon when my wish came as true.
6 I had been on the Loch for about an hour when
7 I heard to a strange sound behind me. I looked round

8 And saw at some bubbles on the surface of the water.
9 Suddenly, no more than three metres far away, a big
10 Head had came out of the water – it was the monster!
11 I ran to the other end of the boat to fetch my camera,
12 But in my excitement I tipped the boat over, which
13 Sent me and all from my things into the Loch.
14 My camera was being lost, and by the time I looked
15 Round again, the monster had disappeared.

35. For questions 1-15, read the text and decide which word A, B, C or D best fits each space:

Last summer, air pollution in Paris reached dangerous 0) …… on six separate occasions. As a result, the government have recently decided that public transport in French cities will be 1) …… on days when pollution becomes a 2) …… to people's health, in a(n) 3) …… to encourage people to leave their cars at home.

The Mayor of Paris said that he had several other ideas to reduce the pollution problem, such as free parking on the. 4) …… of the city on hot, still days when exhaust fumes tend to accumulate. He has also 5) …… a $6 million plan for 56 km of bicycle tracks, new pedestrianised 6) …… and a new tram 7) …… for southern Paris. His most popular measure 8) …… becoming mayor last May has been to 9) …… traffic from several streets on Sundays.

Every summer, air quality is at its 10) …… in Paris during holiday weekends, especially one weekend in July when the 11) …… of the population leave by car for their summer holidays. 12) …… then improve for the summer, but deteriorate again when most residents return at the end of August. The free transport 13) …… is part of the response to a new environmental regulation which says that local authorities must guarantee. 14) …… air. If it is 15) …… seriously, locals can look forward to a cleaner Paris in the future.

0. A. levels	B. positions	C. degrees	D. standards
1. A. open	B. loose	C. off	D. free
2. A. risk	B. terror	C. threat	D. damage
3. A. try	B. pursuit	C. trial	D. effort
4. A. outskirts	B. areas	C. suburbs	D. provinces
5. A. exclaimed	B. announced	C. stated	D. put in

6. A. rails	B. zones	C. crossings	D. tracks
7. A. line	B. lane	C. series	D. path
8. A. as	B. from	C. since	D. while
9. A. discharge	B. expel	C. restrict	D. ban
10. A. top	B. limits	C. full	D. worst
11. A. lots	B. majority	C. most	D. plenty
12. A. occasions	B. opportunities	C. conditions	D. situations
13. A. measure	B. action	C. answer	D. move
14. A. saved	B. secure	C. new	D. safe
15. A. taken	B. thought	C. held	D. formed

36. Match the various types of writing with their definitions, then give an example of any five of them:

1. romance	a) story told in pictures and dialogues
2. chronicle	b) educational book
3. thriller	c) story about space or the future
4. biography	d) love story
5. cartoon strip	e) exciting suspense story
6. autobiography	f) non-fiction record of event s as they happened
7. article	g) the author's account of his own life
8. textbook	h) funny story
9. science fiction	i) account of someone's life written by someone else
10. comedy	j) information about smth in a newspaper

37. For questions 1-15, read the text below and decide which word, A, B, C or D best fits each space:

Developing countries

There are (0) …… 140 countries which (1) …… to the Third World and which are (2) …..... as developing, less developed and poor countries. Although there are great (3) …… between them, they do have a number of (4) …… in common. For (5) …… , much of the Third World is in poverty. A few exceptions to this rule are Saudi Arabia, Kuwait and Libya. However, because the economies of these three countries (6) …… largely on one export, oil, they are still vulnerable in the world market. Most of the developing countries (7) …… have very little industry. Farming is often the only (8) …… in which the country can make money. (9) …… worse, many of the countries only produce enough food to

(10) …… their own populations alive. India is a classic example of this, as (11) ……..… less than 70 % of its more than a billion people work the land (12) …… a living. Another feature which links less developed countries is life expectancy. People die younger in the Third World because of the poverty in (13) …… they live. The poor have much less healthy diets (14) …… in developed countries, and health care is also more (15) …… to be inadequate.

0. A. mostly	B. roughly	C. partly	D. evenly
1. A. include	B. attach	C. connect	D. belong
2. A. said	B. known	C. told	D. taken
3. A. changes	B. disagreements	C. differences	D. varieties
4. A. features	B. sides	C. faces	D. signs
5. A. case	B. instance	C. reason	D. fact
6. A. decide	B. insist	C. lean	D. depend
7. A. then	B. although	C. while	D. still
8. A. way	B. type	C. model	D. method
9. A. most	B. more	C. quite	D. even
10. A. have	B. keep	C. hold	D. make
11. A. a	B. the	C. no	D. too
12. A. as	B. for	C. of	D. to
13. A. which	B. where	C. that	D. whose
14. A. as	B. than	C. like	D. or
15. A. likely	B. probable	C. possible	D. definite

38. Read the text below and think of the word which best fits each space:

World Population

By 1993 …… world's human population had reached 5.5 thousand million, and …… the growth has slowed …… in recent years, it will be many decades …… it stops. The reason …… this growth is causing so …… concern is that we cannot keep up …… demand for food, water, healthcare, jobs, education and housing. It also increases the likelihood of damage …… the environment. Much of the growth has been in the poorer countries of the world, but overpopulation is also a problem for some rich countries, including Britain. …… a population of approximately 58 million, Britain has 233 inhabitants …… square kilometre. Furthermore, it is estimated that the …… of people in the country will have increased to 62 million by 2031, at …… time it will start to decline again. Populations

not …… increase because of higher birth rates, but also because of people moving from poor to rich countries, and from the countryside to the towns. In …… , the latter cause is greater …… general population growth and is creating many problems in the towns and cities, especially in poorer parts of the world.

Part 6

Glossary

Unit 1

accumulate - накопичувати, акумулювати
almost - майже
attain - досягати
chemistry - хімія
circumference - півколо
collapse - розпадатися
complex - комплексний

congeal	- згущатися
content(s)	- зміст, вміст, кількість
create	- створювати
crust	- кора
differentiate	- відрізняти
dimension	- розмір
endow	- наділяти
escape	- виділяти
eventually	- урешті-решт
formation	- формування
gaseous	- газоподібний
human communities	- людські спільноти
humanity	- людство
infinitely= continuously	- безмежно
lack	- не вистачає
layer	- пласт
light year	- світовий рік
liquid	- рідинний
make up	- набирати за рахунок
measure	- вимірювати
modify	- змінювати
molten	- розплавлений
oxygen	- кисень
particular	- окремий, особливий, незвичайний
subsidiaries	- філії
the solar system	- сонячна система
throughout	- на всьому протязі, протягом
tiny	- крихітний
Universe	- всесвіт
variety	- різновидність
vastness	- величина
volatile	- леткий
wealth	- багатство

Unit 2

apart	- незалежно від
average	- в середньому прирівнювати,

	домірювати
bend	- гнутись
beneath	- під
cell	- відсік
coast	- узбережжя
compaction	- стискання, ущільнення, затвердіння
continuous motion/movement	- постійний рух
convection	- конвекція, конвекційний
discontinuity	- розрив
drag = to pull	- тягнути
drill	- свердлити, бурити
eruption	- виверження
fissure	- розколина, шпарина
fracture	- тріщина
from above	- зверху
generate	- виробляти
geothermal heat	- геотермальне тепло
glacial plateau	- льодове плато
glaciers	- льодовик
incredible	- неймовірний
indicate	- показувати
interior	- внутрішній
layer	- шар
lurk	- зникати
matter	- матерія
molten state	- розплавлений стан
nutrient	- живлення, живильна речовина
originate	- походити
outer	- зовнішній, навколишній
penetrate	- проникати
pressure	- тиск, напруга
push	- штовхати
refined	- точніші
refined recordings	- уточнені/оброблені записи
remote	- віддалений
significant	- важливий
skin	- (тут) оболонка
solid rocks	- тверді гірські породи
steadily	- постійно, стабільно
sticky	- клейкий, липкий

stun - приголомшувати
subtle - непомітний
surface - поверхня
tar - смола, дьоготь
the mantle - мантія
through - крізь, через
unlock - розкривати
uppermost - верхній
vents - вихід, віддушина
violently - дуже, вельми, сильно, міцно
viscous - в'язкий
volcano - вулкан
warp - коробити, стовбурчитися
wave - хвиля
wind - вітер

Unit 3

backyard - локальний, особливий
belt - зона, пояс
capable - здібний
cliff - бескид
coastal settlements - прибережні поселення
collide - зіштовхнутися
commitment - зобов'язання, здійснення
condemn - осуджувати, вибраковувати
contribute - сприяти
damage - ушкоджувати
devise - винаходити
discolouration - знебарвлювання
epicentre - епіцентр
except - за винятком, крім
fault - скид, розрив
field - область
fracture - ламати, розломлювати
frequent - частий
landslide - зсув
location - локація, місце розташування
magnitude - величина

mid-ocean ridge - середньоокеанський хребет
mighty - сильний
occasionally - час від часу
originate - траплятися
plate - плита
prolonged - довгий
quake-prone - схильний до землетрусів
range - коливатися в межах
release - виділити
result from - виникати внаслідок чого-небудь
ridge - гребінь
safeguard - гарантія, запобіжні заходи
scarp - крутий схил
seismology - сейсмологія
severe - сильний, суворий, лютий
shield - щит
sign - знак
significant - значний
source - джерело
streams - потік, ріка, струмок, біг, хід, течія
subject - зазнавати
submarine - підводний
timber industry - лісопереробна індустрія
unravel - розкривати
valleys - долини, полонини
wide-ranging action - широкомасштабні дії
within - усередині, у межах
woodland - лісиста місцевість

Unit 4

blessing - благословення
catch - улов
coincide - збігатися
conclude - зробити висновки
confirm - підтвердити
conqueror - завойовник
contain - вміщувати
contribute - сприяти
controversial - суперечний
current - течія, потік, біг
curse - прокляття
disappear - зникнути, щезнути

drop - падіння
embarrassing - незручний, бентежливий
evidence - свідоцтво
explorer - дослідник
failure - невдача, пошкодження, зіпсування
famine - голод
fishing grounds - риболовецькі промисли
fleet - флот
flow - текти
manifestation - проявлення
marine - морський
monsoon - мусон
notice - помічати
nutrient-rich - багатий на поживні речовини
observation - спостерігання, спостереження
obvious - очевидний
offshore - морський
onset - наступ
opposite - протилежний
overcome - перебороти
phenomenon - явище
prevailing - переважний
replace - замінити
resort - звертатися, удаватися
reveal - розкривати
sail - плавати, плисти, пливти
scarcity - недостача
scholars - учені
shrink (shrank, shrunk) - скорочуватися, зменшуватися
so - так, так що, таким чином, у такий спосіб
storage capacity - здатність акумулювати
upwelling - підняття

Unit 5

albedo - альбедо
axis of rotation - вісь обертання
ceaseless - безкінечний
clouds - хмари

considerable - значний
distribution - розподіл, розподілення
emanate - траплятися, проходити
forest-clad areas - райони, покриті лісом
gravity - гравітація, сила земного тяжіння
halo - гало, кільце навколо планет, ореол
head - направлятися
heat - нагрівати
herein - у цьому, тут
inclination - наклон
infrared rays - інфрачервоні промені
interfere - перешкоджати
light rays - світлове випромінювання
omen - ознака, призвістка, провість
particles - частки, частинки
penetrate - проникнути
plunge through - стрімко просуватися
protective - захисний
scattered - розсіяний
shimmer - мерехтіти
short-wave - короткохвильовий
solar radiation - сонячна радіація
spectrum - спектр, діапазон
stream out - рухатися потоком
tail - хвіст комети
tiny fraction - крихітна частинка
ultimate - кінцевий
water vapour - водяна пара, випаровування
whip around - обвиватися, хутко повернутися

Unit 6

amazing - дивовижний
approximately - приблизно
carbon dioxide - вуглекислий газ, вуглекислота
coal - вугілля
consequences - наслідки
crucial - важливий
description - опис
equable - одноманітний, спокійний
exhaust - вихлопні гази
fraction - частина
habitable - населений, придатний для життя
humid - вологий

humidity - вологість, вогкість
indeed - дійсно, справді
lapse rate - швидкість зниження
long-wave radiation - випромінювання довгими хвилями
moisture - волога, вологість
nitrogen - азот
non-variant gases - постійні гази
onset - початок
petroleum - нафта
quantity - кількість, частка
rainfall - атмосферні опади
remaining - залишковий
significant - важливий
smokestack - димар
sultry - спекотний, паркий
sustain - підтримувати
variability - мінливість, нестійкість
variant gas - непостійні гази
warmth - теплота
weather conditions - погодні умови

Unit 7

assure - гарантувати, забезпечувати
capture - загарбати, здобути силою
commodity - об'єкт споживання
crossroads - перехрестя, роздоріжжя
dam - дамба, гатка, гребля
deliver - приносити
discovery - відкриття
divert - відводити, спрямовувати в іншому напрямку
drain - осушувати
drainage ditch - стічна канава, каналізація
effluent - стічні води, стік
escalate - загострювати(ся)
evaporation - випаровування
grab - захопити, загарбати
humid - вологий
indication - показник
liquid state - рідинний стан
locale - місцевість

precipitation - опади
rate - швидкість
renew - відновити
runoff - витік
seep - просочитись
sewage - стічні води, нечистоти
solid state - твердий стан
surplus - надлишки
trade winds - пасатні вітри
trades - пасати
tributary - притока (річки)
unceasing - безперервний
vapour state - газоподібний стан
water supply - водопостачання, водні запаси
westerlies - західні вітри

Unit 8

become acquainted - ознайомитися
bit by bit - крок за кроком
boreholes - бурова свердловина
core - ядро
correlation - співвідношення
cross section - поперечний розріз
crust - земна кора, поверхневий шар
discrete - окремий
earthquake - землетрус
establish - встановити
flow - потік лави
fossils - копалини
glaciation - заморожування, покривання кригою
harbour life - життя в гавані
layers - шари, верства, пласти
mantle - покрив, мантія
marine sliding - морський шліф, спуск
overnight - за одну ніч
pertain - стосуватися
punch - пробивати отвір
refer to - посилатися, говорити про

retrieve - відновлювати, рятувати
samples - зразки
scale - масштаб, співвідношення, шкала
seismic events - сейсмічні явища
sequence - послідовність
sheer - прямовисний, стрімкий
strain - механічна дія, деформація
tend to be - мати тенденцію
thruster - реактивний двигун
tilt - схил, хвостовий молот
timetable - таблиця часу
solidify - затвердіти

Unit 9

abandon - залишати, покидати
accomplish - завершувати
agency - сприяння
amount - кількість
ban - накладати заборону, забороняти
brink - край, кінець, грань, межа
by virtue - на підставі, через, за допомогою
capacity - потужність, міць
compassion - співчуття, співчування
councillor - радник, член ради
customary - звичайний, звичний
energy - енергія
foot-pound - футо-фунт
force - сила
friction - тертя
horsepower - кінська сила
indirectly - непрямо, посередньо
joule - джоуль
kinetic energy - кінетична енергія
measure - вимірювати
metric system - метрична система вимірювання
motion - рух
pass - передавати, проходити
physical quantity - фізична кількість

position - стан, положення
possess - володіти, мати, бути наділеним
potential energy - потенційна енергія
power - сила, потужність
radiant energy - енергія випромінювання
restrict - обмежувати
specific property - особлива властивість
welfare rules - критерії добробуту
work - робота

Unit 10

application - застосування
available - корисний, доступний
average - середній, помірний, пересічний
benefits - переваги, привілеї, блага, вигоди
cancel - анулювати, скорочувати
civilisation - цивілізація
contemplate - розмірковувати
convert - перетворювати
derive from - одержувати, отримувати
development - розвиток
evaporate - випаровуватися
explosives - вибухові речовини
fuels - паливо
global warming - глобальне потепління
heating - нагрів, нагрівання
impact - дія, вплив
interior - внутрішній
lighting - освітлення, освітлювання, світло
manufacturing - виробництво, вироблення
meltwater - тала вода
nuclear reactors - ядерні реактори
previous - попередній
saline - з умістом солі, соляний, солоний
source - джерело
spectacular - захопливий, захоплюючий
storing - запасання, набуття, накопичування
sunlight - сонячне світло
swamp - потопати, тонути

tap - відкривати, починати використовувати
transforming - трансформування, перетворювання
transmit - передавати, проводити
trigger - приводити до, викликати, спричиняти, зумовлювати
ultimately - зрештою

Unit 11

abbreviation - абревіатура, скорочення
amply - цілком достатньо
arrow - стрілка
carbon - вуглець, графіт
chemical equation - хімічне рівняння
chlorine - хлор
compound - сполука
convention - згода, угода
copper - мідь
decompose - розкладатися
despite - незважаючи на, усупереч
durable - тривалий, міцний
existence - існування
indefinitely - нескінченно, необмежено
invariable proportions - постійні співвідношення, розміри
lead - свинець
lenses - лінзи, оптичні стекла
matter - матерія
mercury - ртуть
neon - неон
particle - частка
pollution - забруднення
precisely - точно, достотно
solids - тверді тіла
structureless - аморфний, безструктурний
subscript - приписування, підпис
substance - речовина
sulphur - сірка
suspect - мати сумніви, підозрювати
suspicion - підозра
tin - олово

transparent - прозорий
ultimate - елементарний, основний

Unit 12

abundant - багатий, численний
aggregates - сукупність
amphibians - амфібії, земноводні
apparent - очевидний
cleavage - кліваж, шарування
coarse-grained - грубозернистий, крупнозернистий
conspicuous - помітний, значний
constituents - компоненти
crack - тріщина, розколина, шпара
crystalline solids - тверді тіла кристалічної структури
discern - розпізнавати
emerge - з'являтися, виникати, поставати
feldspar - польовий шпат
galena - галеніт
iron - залізо, залізна руда
lattice - просторова решітка кристала
limestone - вапняк
mammals - ссавці
mica - слюда
minerals - мінерали
minute - ретельний
native - самородний, чистий, щирий
nomenclature - термінологія, найменування
nutrients - поживна речовина, живильна речовина
ore - руда
pollination - запилення, запилювання
potassium nitrate - нітрат калію
predators - хижаки
redundancy - дублювання
rocks - гірська порода
silicates - силікати
soluble - розчинний
timber - деревина, ліс, будівельне дерево

Unit 13

additional support - додаткова підтримка
attribute - приписати, відносити, пояснювати
boundaries - межа, рубіж

burden - навантажувати, обтяжувати
casual - випадковий, тимчасовий
coal - вугілля
convince - переконувати
debris - уламки, відламки
desert - пустеля, пустиня
devise - придумувати, вигадувати, розробляти
drift - дрейф, розходження
envision - уявляти подумки
exacerbate - поглиблювати, посилювати
extension - простір, протяжність, поширення
firm ground - тверда основа, тверда підстава
frigid - холодний
glance - швидкий погляд
landmasses - маси земної товщі
margin - межа, грань, край
migrate - мігрувати
peninsula - півострів
rain forest - тропічний ліс
retreat - відходити, відступати, віддалятися
sandstone layer - шар піщанику (пісковику)
sediments - відкладення, осадочні породи
skull - череп
slope - схил, нахил, спад, похил
species - вид
startlingly - навдивовижу, на диво
succession - послідовність, неперервний ряд
survey - топографічна служба, огляд
trace - слід, межа
vegetation - рослинність

Unit 14

asteroids - астероїди
by virtue of - завдяки, дякуючи
comets - комети
composition - сполука, сполучення
compression - компресія, стискування
contraction - скорочення, стиск, стиснення
counterclockwise - проти годинникової стрілки
crescent - півмісяць
dust speck - пилинка, порошинка

emptiness	- порожнява, порожнеча
equilibrium	- рівновага, сталість
flare-ups	- спалах полум'я
glow	- світитися
invention	- винахід, відкриття
luminous	- який світиться, світловий
meteors	- метеори
notable	- відчутний, помітний, вартий уваги
novae	- нові зірки
occult force	- окультні сили
orbit	- орбіта, сфера
pebble	- галька, кругляк, булижник
plane	- плоскість, площина
poise	- балансувати, ширяти
prodigious	- дивовижний, гідний подиву
revolve	- обертатися
rotate	- обертатися
satellites	- супутники
scarcely	- ледве, ледь, заледве, насилу
solar system	- сонячна система
supernovae	- понаднові зірки
supply	- ресурси, підтримувати, постачати
unimaginable	- неймовірний, надзвичайний
vicinity	- сусідство, близькість

BOOK 2

Part 1

Texts for additional reading and speaking practice

Unit 1. Earth

1. Read and learn the following words:

contain	- містити в собі
exist	- існувати
spin	- обертатися
axis	- вісь
coastline	- берегова лінія
crack	- тріщина
liquid	- рідина
layer	- шар

2. Read aloud the following word combinations and translate them:

once every year, compared with, work out, the inner core of the earth, earth looked very different, molten rock is forced up, two halves are pushed apart, come into existence, turn into solid rock.

3. Read and translate the text:

Earth

The Earth is different from the other planets in the Solar System because it has water and an atmosphere containing oxygen, so life can exist here. The earth goes around the Sun in a great orbit once every year. This causes the seasons. The earth also spins round on its own axis once every 24 hours, and this causes day (when one side faces the Sun) and night (when the same side faces away). The earth is tiny when compared with many other planets, or with the Sun. The planets Mercury, Venus, Mars and Pluto are smaller: Jupiter and Saturn are hundreds of times bigger. The Sun is over a million times bigger then the Earth.

In the distant past the earth looked very different. The continents and the oceans have changed tremendously. For example, 200 million years ago there was no Atlantic Ocean. North America, Europe and part of Asia were joined as one continent which we call Laurasia. South America, Africa, India, Australia and Antarctica formed a large southern continent called Gondwanaland. We can work out when the Atlantic began to open up, and how wide it was at different times.

This continental drift seems evident when we see how well the coastlines match up. For example, Africa and South America fit nearly together. Also, the sands and muds on the bottom of the ocean can be dated accurately, and they become younger and younger as you get nearer to the centre of the ocean.

What is happening is that there is a deep crack right up the middle of the Atlantic which is like a line of small volcanoes. Molten rock is forced up

the crack and the two halves of the Atlantic are pushed apart. A new ocean floor is created in the middle with Africa westwards. This movement is only 1 to 10 cm per year. The surface of the Earth is divided up into several large plates, and these are all moving in different directions. North America will eventually reach Russia to the west. California may drift away from the rest of north America.

Scientists do not know exactly what the Earth is like inside. We live on the outer part which is made from hard rocks and covered with water in places. This is the crust. The inside of the earth is very hot, and below about 70 km the rocks are all in the form of molten liquid. We know this because minors have found that the rocks become warmer and warmer down deep mines, and molten rock often comes to the surface through volcanoes. The main inner layer, the mantle, is made of molten rock, and the inner core of the earth is made from solid and liquid metal.

The Universe is said to have come into existence as much as 20,000 million years ago. We shall never really know how this happened. The most popular explanation is the "big bang" theory. According to this, there was an enormous explosion which sent gases and particles hurtling out in all directions. Gradually, galaxies and solar systems began to form from this swirling mass, and the Sun might have eventually formed about 5,000 million years ago.

The Earth is thought to have formed 4,600 million years ago as a ball of molten rock. It was probably as hot as $4{,}000^0$C. It took many millions of years for the Earth to cool down enough for a crust to form, and the crust must have been very much like this at first. Molten rock turns into solid rock at temperatures of 800-$1{,}500^0$C, so the early Earth's crust would have been too hot to stand on.

The early Earth probably had no atmosphere, just like most of the other planets now. However, gases were ejected from volcanoes all over the surface, and a primitive atmosphere developed. This atmosphere had no oxygen. The first forms of life are believed to date from 3,500 million years ago, and they lived without oxygen. Oxygen came much later, since it is produced mainly by plants.

4. Answer the questions:

1. Why is the Earth different from other planets?
2. How often does the earth go around the Sun?
3. What causes the seasons?
4. What causes day and night?

5. What planets are smaller/bigger than the Earth?
6. Did the Earth look the same in the past?
7. Do we know what is the Earth like inside?
8. How old is the Earth?

5. Are the following statements true or false?

1. The Earth is the same as the other planets in the Solar System.
2. There are 15 planets in the Solar System.
3. The Earth goes around the Sun and this causes the seasons.
4. The earth is the largest planet.
5. We all know what the earth is like inside.

6. Read aloud the following pairs of words. Name synonyms, and then antonyms:

1. different – various; 2. complete – full; 3. complicated – easy; 4. useful –useless; 5. usual – unusual; 6. to assist – to aid; 7. to include – to involve; 8. to include – to exclude; 9. high – low; 10. to provide – to supply; 11. to alter – to change.

7. Match the verbs with explanations:

to provide	- data for the determination of Earth's age
to assist	- the relative density of the ore
to measure	- equipment necessary for prospecting
to detect	- radioactive anomalies
to depend on	- geologists in searching for mineral deposits
to emit	- different amount of radiation

Unit 2. Mountains

1. Read and learn the following words:

valley	- долина
jagged peak	- гострокінцева вершина
gorge	- вузька ущелина
soil	- ґрунт
altitude	- висота
fossils	- скам'янілості
bed	- дно

silt	- мул
monsoon	- мусон

2. Read aloud the following word combinations and translate them:

worn away, shed rain, to cope with, neighbouring rocks, to bulge upwards, curve in a great arc, rain bearing monsoon, snow-capped peaks.

3. Read and translate the text:

Mountains

As soon as mountains start to rise above the surrounding land they are attacked by water, wind, rain and ice. The softer rocks are soon eroded to form valleys, and jagged peaks form as the valleys are cut back into the hills. Young and rapidly rising mountains have high steep-sided peaks and deep valleys and gorges. In time, the peaks of the mountains and the sides of the valleys are worn away, the hills become lower and more rounded and the valleys become wider, with slower-flowing, less powerful rivers. In old age, a mountain range may become little more than a gently undulating plain.

As you climb up a mountain, the temperature falls by 1^0C for every 150 m. There is snow on the top of high mountains even at the Equator. Also there is less oxygen in the atmosphere the higher up you go. Winds are often very strong, and the weather can change very quickly. Mountains have a dramatic effect on the climate of surrounding areas. As the clouds rise over the mountains, they shed their rain, so the side of a mountain range where the wind blows is often very wet, but the sheltered side (the rain-shadow) gets very little rain. An example of this is in California where the western side of the Sierra Nevada receives rain brought in from the Pacific, but on the eastern side is the desert called Death valley.

Mountain plants and animals have to cope with extremes of temperature: hot days and cold nights, and very high winds. Mountain soils are often thin, as soil is washed down the slopes. Above a certain altitude, called the tree-line, trees cannot grow as conditions are too harsh, and the vegetation is stunted and slow-growing. Many animals, such as mountain hares and ptarmigan have extra thick coats in winter.

The continents sit on great plates of the Earth’s crust which slowly move over the surface of the planet. Where two plates move towards each other, the sediments on the floor of the ocean between them are squeezed up to form mountain ranges, such as the Alps, Himalayas, Andes and Rockies. This is why rocks containing fossils of marine animals can be found at the top of mountains.

Many mountains are formed when molten rock from deep inside the Earth rises to the surface. It may pour out of the ground as lava, forming a volcano. As the lava cools, it forms hard, solid rock. Mount Fuji in Japan and Mount Vesuvius in Italy are volcanoes. The largest volcanic mountain in the world is Mauna Kea in Hawaii, which rises 10,000 m from the bed of the Pacific Ocean.

Sometimes huge blocks of rock can split and slide along lines of weakness called faults. Great masses of rock may be tilted or lifted above the neighbouring rocks to form mountains. Examples are the Sierra Nevada mountains in the western United States, the Black Forest and Harz mountains in Europe, and Mount Ruwenzori in East Africa, which reaches a height of 5,167 m.

Sometimes the molten lava does not reach the surface, because the rocks above are too strong to give way. Instead, it forces the rocks to bulge upwards, to form a dome-shaped mountain. Sometimes the pressure comes not from lava, but from moving water underground, thick with dissolved salts. The Black Hills of South Dakota, in the USA, are the eroded remains of a dome mountain.

The Himalayas area series of mountain ranges which curve in a great arc for 2,500 km from Pakistan in the west to Tibet in the east. They form the largest mountain system in the world. Thirty mountains reach heights of over 7,300 m above sea-level. There are many jagged snow-capped peaks and large valley glaciers. In places, the rivers have cut gorges up to 4,900 m deep. Nineteen large rivers drain the Himalayas, including the rivers Indus and Brahmaputra. They carry silt and mud from the eroding mountains to the great flood-plains in India and Bangladesh, forming the rich soil on which crops like rice and cotton are grown.

The Himalayas began to form about 38 million years ago. The sediments of the ancient Tethys Sea became crushed and folded as the continental plate bearing India was forced up against the Eurasian plate. The mountains are still rising today. In the heart of the Himalayas are very ancient rocks, up to 4,600 million years old. The climate is very different on the north and south sides of the mountain system. To the south, India and Pakistan are protected from cold air from the north, and have a temperate climate. As the rain-bearing monsoon winds blow north from the Indian sub-continent, they are forced to rise over the Himalayas, dropping their rain and snow. Parts of the Himalayas have over 3,000 mm of rainfall a year. North of the Himalayas, the winds have lost their moisture. In Tibet desert conditions exist. Rice, cereals, sugar cane and other crops are grown in the river valleys and on hill terraces. Orchards of fruit trees, vineyards and tea plantations flourish on the

lower slopes. Sheep, goats and yaks, a kind of mountain cattle with long shaggy hair well-suited to the harsh mountain climate are reared, too. Yaks are also used to carry people and heavy loads.

About one-third of the Himalayas is covered in forest, used to make paper, matches and other products. The trees also provide firewood for local people. But too many trees have been felled on the steeper slopes and the thin exposed soil cannot absorb the heavy rainfall. The soil washes away down the slopes, and disastrous floods occur further down the rivers, particularly in Bangladesh.

The mountains contain valuable minerals and gemstones, iron ore and coal. Many of the rivers have been dammed to produce hydroelectric power. The high mountains make it difficult to build roads and railways, and many communities are very isolated.

The Rocky Mountains, often called the Rockies, are a series of mountain ranges running down the western side of North America from Alaska to Mexico. Some mountains have gentle slopes with rounded tops, but others are tall with jagged rocky peaks, many over 4,000 m above sea-level. Between the snow-capped peaks lie wide valleys, plateaux, lakes and rivers. In places there are hot springs, such as the geysers in Yellowstone National Park.

The Rockies started to form 190 million years ago, and are still rising slowly today. As the land has risen, the rivers have cut deep valleys and canyons in places. Many great rivers start in the Rockies. The mountains separate rivers flowing east, such as the Missouri, from those flowing west, like the Colorado River.

The Rocky mountains are home to 5 million people. The mountains contain deposits of metals such as iron, silver, gold, lead and zinc, as well as uranium, phosphates and other salts. There is also coal, oil and natural gas. Many of the rivers have been dammed to produce hydroelectric power. It is generally the case that the higher up the mountains, the more plentiful the rainfall and snowfall.

The alpine meadows are full of wild flowers. Below the meadows, forests cover much of the mountain slopes, and cattle and horses graze on the grassy lower slopes. One of the most important sources of income is tourism, including skiing, fishing and walking in the many national parks.

The Andes are a large series of mountain ranges stretching 8,900 km down the whole west side of South America. There are many snow-capped peaks over 6,700 m. In parts of the Andes, mountain ranges are separated by high plateaux, containing lakes such as Lake Titicaca. From the high, jagged peaks in the south, capped with permanent snowfields, glaciers push down to the Pacific Ocean. The formation of the Andes began about 80 million years ago and the mountains are

still rising. There are many active volcanoes. The western slopes are desert or semi-desert in much of Peru and Northern Chile, but forested further south.

4. Answer the questions:

1. What are the softer rocks eroded to?
2. What do young mountains look like?
3. How does the atmosphere change with the height?
4. What effect do mountains have on the climate?
5. How are mountains formed?
6. What is the largest volcanic mountain?
7. When are dome-shaped mountain formed?
8. Where are the largest mountain systems in the world found?
9. What are alpine meadows?
10. Describe the Andes.

5. Are the following statements true or false?

1. The soft rocks do not form valleys.
2. Young mountains are flat.
3. Young mountains do not change with the time.
4. The temperature falls as you climb up a mountain.
5. The weather is unchangeable in the mountains.

6. Read aloud the following pairs of words. Name synonyms, and then antonyms:

1. different – various; 2. to affect – to influence; 3. sufficient – insufficient; 4. sufficient – enough; 5. advantage – disadvantage; 6. expensive– inexpensive; 7. cheap – expensive; 8. to determine – to define; 9. stable – unstable; 10. above – below; 11. principal – main; 12. to obtain – to get; 13. suitable – unsuitable; 14. similar – different; 15. permanent – continuous.

7. Match the nouns from A with adjectives from B:

A. 1) methods; 2) output; 3) conditions; 4) character; 5) grade; 6) openings; 7) ores.

B. a) average; b) long; c) general; d) principal; e) hilly; f) mining; g) non-ferrous.

Unit 3. Volcanoes

1. Read and learn the following words:

cone	- конус
ash	- попіл
remains	- залишки

dormant - сплячий
extinct - погаслий
plate - плита

2. Read aloud the following word combinations and translate them:

lava forces its away, completely buried under the ash, wear away, areas which suffer from volcanoes.

3. Read and translate the text:

Volcanoes

A volcano is a mountain or hill made of molten rock called lava which comes from deep beneath the Earth's surface. When a volcano erupts, lava and ash build up to make a cone. Some volcanoes give off clouds of ash and gas when they erupt. Others have streams of red-hot lava pouring down their side. Volcanoes can form on land or on the ocean floor. Some undersea volcanoes grow high enough to reach above sea-level and become islands.

It is not often that anyone can see a new volcano appear and then grow. In Mexico, in 1943, some villagers were worried by earthquakes. Then a crack appeared across a cornfield and smoke gushed out. The crack widened, and ash and rocks were hurled high into the air. Soon, red-hot lava poured out. After a week, a volcano 150 m high stood where the cornfield had been, and the villagers had to leave. Mount Paricutin grew to 275 m in a year and to 410 m after nine years.

The molten rock deep beneath the Earth's crust is called magma. It forces its way up through cracks and weak spots in the Earth's crust and spills out as lava. As magma rises, gases separate out from the molten rock. These gases may collect near the surface and cause a great explosion. On the island of Martinique, in the Caribbean, 20,000 people were killed by an explosion of hot gases and ash when Mont Pelee erupted in 1902.

When a volcano erupts, pieces of broken rock and ash are often thrown out with the lava. Large lumps are called "volcanic bombs". As the rock and ash cool, they make layers of solid rock. When Vesuvius, in southern Italy, erupted in the year AD 79, the town of Pompeii was completely buried under volcanic ash. Further round the Bay of Naples, Herculaneum was buried by mud which swept down the side of the volcano. Today, the remains of both towns have been dug out for all to see.

Volcanoes eventually die. A volcano that has not erupted for a long time is said to be dormant. There is always the danger that a dormant volcano may suddenly erupt. When people think a volcano has finally died, then it is

called extinct. Gradually, the volcano will be eroded. The softer rocks are worn away first, and in some places the only part left is the hard plug which filled the vent of the volcano.

There are about 700 active volcanoes in the world today, including some that are under the sea. Most of them are arranged like beads on a string. Many volcanoes surround the Pacific Ocean. The areas with volcanoes are also the areas which suffer from earthquakes. This fact helped scientists come up with the theory of plate tectonics. They believe that the Earth's crust is broken into huge slabs, called "plates". Most of the world's volcanoes occur where plates meet, which is where magma can rise to the surface. A few, such as in Hawaii and the Canary Islands, occur above " hot spots" where very hot magma seems able to pierce through a plate.

4. Answer the questions:

1. What is a volcano?
2. What happens when a volcano erupts?
3. What can volcanoes form?
4. What happened in 1943 in Mexico?
5. What is magma?
6. What happened when Vesuvius erupted?
7. When is the volcano dormant/extinct?
8. How many active volcanoes are there in the world today?

5. Are the following statements true or false?

1. A volcano is a mountain made of molten lava.
2. Volcanoes can form only on the ocean floor.
3. We can often witness birth of a volcano.
4. Magma is the molten rock.
5. Volcanoes never die.

6. Find in B equivalents from A:

A. 1) in this way; 2) in the same way; 3) in most cases; 4) in these cases; 5) for this purpose; 6. on a large scale; 7) in order (to); 8) a number of.

B. 1) у цих випадках; 2) таким чином; 3) з метою; 4) широко; 5) у більшості випадків; 6) ряд; 7) для того щоб; 8) багато.

7. Define what parts of speech are the following words and translate them:

access – accessible – inaccessible; advantage – disadvantage; to consider –consideration – considerable; to contaminate – contamination; to treat – treatment; to differ – different – difference; to disturb – disturbance; to consume – consumption – consumer; to facilitate – facility; profit – profitable.

Unit 4. Landforms

1. Rea**d** and learn the following words:

landscape	- ландшафт
waterfall	- водоспад
cliff	- круте урвище
sand dune	- піщана дюна
demolish	- руйнувати
pebble	- галька
artificial	- штучний
marsh	- болото

2. Read aloud the following word combinations and translate them:

change through time, the angle and shape of slopes, clue to the past, during the ice ages, the debris of broken rock, the force of gravity, earth-moving machinery.

3. Read and translate the text.

Landforms

Landscapes are made up of landforms such as mountain peaks, lakes, volcanoes, waterfalls, cliffs and sand dunes. The science that studies landforms is called geomorphology. Geomorphologists are interested in the shape of landforms, the processes that make them the shape they are, and how their shape has changed through time.

Very few landscapes are flat. Most land slopes. Studying the angle and shape of slopes can give clues to the past. River valleys are one of the most common landforms. A large straight valley with steep sides and a flat floor may be a sign that it contained a glacier during the ice ages.

Landforms usually change slowly. It may take millions of years for rain, wind, frost and sunshine to demolish a mountain. The debris of broken rock or grains of sand is carried away by water, wind or the force of gravity to pile up somewhere else as new landforms.

At the coast, however, landforms can change relatively quickly. Waves erode the cliffs to form narrow beaches of pebbles and sand, and the wind blows the sand into lines of dunes that slowly move inland. The greatest changes occur during rare but fierce storms. Whole beaches may suddenly appear or disappear during a storm.

People make landforms too, especially with the help of powerful earth-moving machinery. Surface mines and gravel excavations leave behind huge holes, which may later fill with water. Mining also produces heaps of waste. These artificial hills have sometimes been unstable. A wet spoil heap collapsed at Aberfan in Wales in 1966, burying a school and killing many children.

People have created dry land from marshes. The Dutch polders were built by constructing embankments or dikes around marshland and then pumping out the water. Good farmland is left, protected from flooding by the dike.

Other landforms made by people include straightened river channels and drainage ditches. At Hallsands in Devon the removal of shingle from the beach left the coast with no protection and the sea demolished a village.

On the Mississippi delta in the southern USA, walls have been built along the river channels to protect nearby towns and farms against flooding. But this also prevents the floods dropping sediment to build up the delta. Buildings that were once on the coast are left stranded on newly formed islands way out to sea.

Erosion

All around us, the Earth's surface is being worn away by water and by wind. This process is called erosion. Moving water includes mighty rivers and little streams, the sea and also ice which moves over the land as glaciers and ice-sheets. Water, ice and wind not only wear away the land, they also carry away eroded material and deposit it in other places, especially in seas and lakes.

The action of snow and frost, sun and rain on rocks is called weathering. When rocks are exposed to the atmosphere, they are affected by the weather. Constant heating and cooling can split some rocks. When water in the rocks freezes it expands and cracks them. Rain water is a weak acid and can dissolve or change the chemicals in rocks. Weathering is also speeded up by plant roots and burrowing animals. Rock pieces that have been broken up by weathering are moved away by water, ice and wind. When wind, water and ice are armed with pieces of rock, however small, they can erode even more powerfully.

Erosion is usually a slow process. But during storms, water and wind are much more powerful. They carry bigger fragments of rock and erode the land more quickly. A river in flood can erode the land faster in a few hours than it would normally do in years. The floodwater is armed with pieces of rock and fallen trees. It can roll great boulders along the river bed, and alter its

course to cut new channels. During storms, the great waves hurling water and stones at a cliff can be an awesome sight. After a storm, you can spot lots of signs of erosion along the coast. A sandstorm in the desert flings millions of hard sand grains against the rocks, helping to erode them into strange shapes.

The rocks of the Earth's surface also affect the speed of erosion. Faults and folds make weaknesses that can be attacked. Soft rocks are eroded more quickly than hard ones. Hard rocks may make a waterfall along a river or headlands at the seaside.

The pattern of erosion is part of a cycle. Eventually, the great mountain ranges will be worn down to become plains. The small particles of rocks carried by rivers and glaciers end up in the sea, building up sediments on the sea bed. After millions of years, they become sedimentary rocks such as sandstone and clay. Eventually, those rocks may be pushed up to make new land and new mountain ranges. This land in its turn will be worn down by water, ice and wind.

4. Answer the questions:

1. What are landscapes made up of?
2. What is geomorphology?
3. What can give a clue to the past?
4. Do people make landforms?
5. What are the agents of erosion?
6. What is weathering?
7. What can split rocks?
8. Is erosion part of a cycle?

5. Are the following statements true or false?

1. The science that studies landforms is called geomorphology.
2. Very many landscapes are flat.
3. Landforms usually change very fast.
4. People can make landforms.
5. The Earth's surface never wears away.

6. Define the meaning of the words in italics by similarity of their roots with the roots in Ukrainian language:

ocean floor; mineral reserves**;** mineral resources; potential ores; ore deposits of hydrothermal origin; wide oceanic ridge system; concentration of minerals probably derived from sea water; experts; common salt; central place; metal-bearing sands and gravel; high temperature mineral solutions; traditional land mining; sea transportation.

7. Translate into English:

1. На земну кору впливають повітря та вода.

2. На формування ландшафту України впливають холодні вітри з Льодовитого океану.

3. За теплою зимою прийшло прохолодне літо.

4. На температуру повітря дуже впливає висота.

5. За поясом степів йде зона пустель.

Unit 5. Glaciers

1. Read and learn the following words:

glacier	- льодовик
sheet of ice, ice layer	- шар льоду
downhill	- униз
obstruction	- перепона
moraine	- морена
iceberg	- айсберг
fits and starts	- поштовхи та струси
thaw	- танути
pack ice	- паковий лід

2. Read aloud the following word combinations and translate them:

Glacier moves in fits and starts, break away and float, dumped in untidy heaps, carves out narrow streams.

3. Read and translate the text.

Glaciers

A glacier is a moving sheet of ice. Glaciers usually form when enough snow builds up an ice layer on the land. They can be 100 m high. If it is on a slope, the great weight of the ice causes the whole sheet to move downhill. This is because the layers of ice at the bottom of the pile where it rests on the ground become softened and slippery, and the glacier begins to move like a very slow river.

The glacier usually begins high in a mountainous region, and it moves downhill in fits and starts. The ice may move smoothly for a while, until it comes up against an obstruction. This may be a bend in the valley, or a mound of broken rocks which have been pushed ahead by the glacier itself. Glaciers move at different speeds, usually between 1 cm and 1 m per day. The middle part of the glacier moves faster, and the edges, which rub against the sides of the valley, may be much slower. Glaciers may move downhill and pass right into the sea. When they enter the sea, large pieces break away and float off as jagged icebergs.

Glaciers that flow in valleys make their valleys wider and deeper. The bottom of a glacier carves out a U-shape. The ice simply cuts away the soil and boulders, and pushes them ahead. At the front edge (the "snout"), rocks and soil may be dumped in untidy heaps called moraines. The melt-water in summer carves out narrow streams that run downhill in front of the glacier. These streams can carry waste material worn away by the ice for many kilometres. Evidence of past glaciers can be found over a very large area. Most of the British Isles and northern Europe, for example, lay under ice during the last ice age. Here, most of the upland valleys were widened by glaciers while the lowlands were covered by sands, clay and boulders.

Glaciers can be seen today in the European Alps and other high mountain ranges, in Alaska and northern Canada, New Zealand, Greenland and Antarctica. Over 10 percent of the Earth's land surface is permanently covered by ice. The largest glacier in the world is 514 km long. It is the Lambert Glacier in Antarctica.

The fastest glacier in the world is the Quarayas Glacier in Greenland, flowing at a rate of 20 m per day.

Frozen seas

Near the poles, parts of the Arctic and Southern oceans form permanently frozen ice shelves stretching out from the coast. In slightly warmer parts, the sea freezes in winter, forming pack ice up to 2 m thick. In summer it thaws, and the pack ice breaks up into flat-topped icebergs.

Arctic icebergs are typically tall and uneven. They may drift hundreds of kilometres and are often shrouded in fog.

Antarctic icebergs tend to be flatter-topped and larger than those in the Arctic.

Largest iceberg. More than 31,000 sq km (335 km long and 97 km wide, bigger than Belgium), seen in the South Pacific Ocean in November 1956.

Tallest iceberg. 167 m high, seen off west Greenland in 1958.

Icebergs are huge lumps of ice which have broken away from ice-sheets and glaciers and are floating in the sea. Only about a ninth of an iceberg shows above the surface. The part that is hidden under the water may be wider than the part that shows. This is a great danger to shipping. The liner Titanic sank after hitting an iceberg in the North Atlantic in 1912.

The largest icebergs break away from the edge of Antarctica, such as from the Ross Ice Shelf. This area of floating ice is as large as France. The front of this shelf is 650 km long, with ice-cliffs 50 m high.

In the arctic, icebergs break off from the Greenland ice-sheet. They are not as large as the Antarctic ones, but are often taller. Glaciers reach the sea around Greenland, and as the ice begins to float, huge lumps break off. This is called "calving". Icebergs begin to melt as they drift away from the polar regions. Cold currents carry icebergs on great distances. When the cold

Labrador Current continues further south than usual, it carries Arctic icebergs into the busy North Atlantic shipping routes. The International Ice Patrol looks out for drifting bergs. Ships can be warned, and sometimes the bergs themselves can be towed away by powerful tugs.

Ice-caps and ice-sheets

Ice-caps and ice-sheets are large areas of ice and snow which permanently cover the land. Ice-sheets are larger than ice-caps. Today, the main ice-sheets of the world are found in Greenland and Antarctica.

Here, temperatures stay at or below freezing all the year round. Snow accumulates throughout the long winter, but very little melts in the short summer. As the snow builds up, it turns to ice under its own weight. This great weight makes the ice spread out and flow downhill. It moves down valleys to form glaciers. If the ice reaches the sea, it may spread out to form an ice-shelf, or it may break up into icebergs.

The weight also weighs down the land on which it rests. If all the ice on Greenland and Antarctica melted, the land would rise. But if all the world ice melted, the sea-level everywhere would rise at least 65 m. Huge areas of lowland would be drowned, and the shape of the continents would change.

Ice ages

The present-day ice-caps and ice-sheets are all that remain of much larger areas of ice which spread out over much of Europe, Russia and North America in the ice ages. As the ice-sheets moved over the land, they changed it. Huge areas of rock were scraped bare and the fragments of rock scraped off were dumped at the edge of the ice-sheet. These deposits are called moraines. During periods of warmer weather, the ice melted and the edge of the ice-sheets retreated. Moraines were dumped on the land and spread by water flowing from the melting ice. The hills and hollows left by the ice created many lakes and new river courses. Some rivers were dammed by moraines, while others followed new courses which had been cut by the ice.

4. Answer the questions:

1. What is a glacier?
2. Where do glaciers usually begin?
3. How does a glacier move downhill?
4. How do glaciers affect the valleys?
5. Where can we find evidence of past glaciers?
6. Where can we see glaciers today?
7. What are icebergs?
8. Are there any organisations monitoring icebergs?
9. What are ice caps?

10. What are moraines?

5. Are the following statements true or false?

1. A glacier is a moving sheet of ice.
2. Glaciers can be 100 m high.
3. Glaciers move uphill.
4. Glaciers which flow in valleys make them wider and deeper.
5. We cannot see glaciers anywhere nowadays.

6. Translate into English.

Тихий океан – найбільший океан Земної кулі. Біля східних берегів Росії він утворює моря, відділені одне від одного групою островів. Що північніше море, то воно холодніше.

Найхолоднішим є Беринтове море. Його покриває крига протягом десяти місяців на рік. Береги моря замерзають приблизно на сім місяців. Найтепліше зі всіх трьох морів – Японське море. Вода замерзає тільки в його північній частині та в бухтах. Моря Тихого океану багаті на рибу.

7. Speak about some glaciers using the following:

to be located, to border, to extend, coast, to bear, rocky, marshy, to be indented, due to, average, depth, to reach, to be noted for, a number of, to be characterised, as a result of, throughout the year.

Unit 6. Rivers

1. Read and learn the following words:

mouth	- гирло
estuary	- дельта
rivulet	- струмок
trickle	- струмочок, цівка
tributary	- притока
spring	- джерело
source	- верхів'я
meander	- коліно
wadis	- висохлі русла рік
rapids	- пороги

2. Read aloud the following word combinations and translate them:

clearly defined banks, merge together to form, drainage basin, well above sea level, winds among the hills, fan shaped delta, unproductive land, a vital source of water.

3. Read and translate the text.

NOTE!

Longest rivers

Nile, Africa – 6,695 km
Amazon, South America – 6,440 km
Chang Jiang (Yangtze), China – 6,380 km
Mississippi-Missouri, USA – 6,019 km
Ob-Irtysh, Russia – 5,570 km
Zaire, Africa – 4,670 km

Rivers

A river is formed when water flows naturally between clearly defined banks. The water comes from rain or snow. When rain falls or snow melts, some of the water runs off the land down the steepest slope, forming trickles of water in folds of the land. These trickles eventually merge together to form streams, which join up to form rivers. The streams which join the main river are called tributaries. Some of the rain-water also sinks into the ground, and seeps down through the rocks until it meets a layer of rock which cannot hold any more water. Then the water runs out at the surface to form a spring.

A river gets bigger and bigger as it flows towards the sea, because more and more tributaries join it. The area of land which supplies a river with water is called its drainage basin.

Rivers cut into the land and create valleys and gorges. Rushing water has tremendous force. A cubic metre of water weighs a tonne. Water can split rocks just by pounding them. But more important is the load of sediment (stones and sands) the river carries. Rocks and soil are swept along by fast-flowing water, scouring the river bed and banks. Large boulders are bounced along the river bed, scouring out a deeper and deeper channel.

The rate at which the water wears away the land depends partly on how hard the rock is, and partly on the slope of the river. The steeper it is, the greater its power to erode (wear away). Where the land is rising or the sea-level is falling, rivers can cut down through the rocks very fast. The mountains of the Grand Canyon in the United States were rising as the Colorado River cut down through it. Today, the river has cut a gorge 1,5 km deep.

The faster a river flows, the larger the rocks and the greater the load of sediment it can carry. When the river's flow is slowed down, it drops some of

the sediment it is carrying, the largest pebbles first, then the sand, and finally the fine silt. This happens when the river enters the still waters of a lake or the sea, or when the valley floor becomes less steep as it leaves the mountains.

Near its source the river is well above sea-level and is flowing very fast, so it has its greatest cutting power. The water sweeps along boulders and pebbles. The boulders grind against each other, gradually breaking down into smaller pieces of gravel, sand and mud. The river is still small, and quite shallow. Its bed is full of boulders. In the middle course the river is not flowing so fast. It contains more water, so its bed is wider, and is lined with sand, small pebbles and water weeds. The river is not powerful enough to rush over large obstacles, so it flows round them, and its course winds among the hills. Where the water swings around a bend, the water on the outside of the bend has to flow further than the water on the inside, so it flows faster. It cuts away the bank on the outside of the bend, widening the valley.

As the river nears the sea, it becomes wide and sluggish, making huge curves (called meanders) around the slightest obstacles. As it spreads out and slows down, it sheds its load of sediment. It wears away tiny cliffs on the outside of the meanders and deposits little beaches of sand on the inside of the bends. When the river floods, it flows over its banks, spreading mud and sand over the surrounding land. As it enters the sea, it builds out a fan-shaped delta of mud.

Many rivers have very different flows in summer and winter. In cold regions, the upper part of the river may be frozen in winter, so flow decreases. Melting snow and ice may cause spring floods. Rainfall may be seasonal, so there are annual floods. In arid lands, some rivers exist only for a brief period after heavy rain, when water rushes off the bare, baked soil, carrying huge boulders and cutting deep gorges called wadis. Other desert rivers vanish long before they reach the sea, as the water simply evaporates or sinks into the sand.

A river's life has three stages from its beginnings in high ground to its joining with the sea: the fast-flowing upper course of a river; in its middle course a river flows more smoothly, often through a wide valley. The sluggish final stage in a river's life as it meanders towards the sea. The wide mouth of the river where it joins the sea is it estuary.

Rivers carry about 8 thousand million tonnes of sediment into the oceans every year.

Nile

The River Nile is the longest river in the world – 6,695 km from source to sea. It drains one tenth of the continent of Africa. The Nile flows out of

Lake Victoria and through a series of spectacular gorges before spreading out across the great papyrus swamp called the Sudd in Sudan. It then becomes the White Nile, and is joined by the Blue Nile and the Atbara River, which both start in the Ethiopian highlands. The Nile then wanders across its flood-plain to Cairo, where it forms a huge delta, 250 km wide, before reaching the Mediterranean Sea. Soil carried down by the river during the annual floods keeps the Nile delta fertile.

In 1979, the Aswan High Dam was completed, damming the Nile to form Lake Nasser. The dam regulates the flood waters, generates hydroelectric power, and irrigates thousands of acres of formerly unproductive land. But it has reduced the supply of minerals to the Nile delta, and so the farmland is less productive and coastal fisheries have been harmed.

The Nile is navigable for most of its course through Sudan and Egypt, except where the water is very low and there are rapids, the Cataracts.

The papyrus beds of the Sudd swamp are home to a rich variety of wildlife, including the shoe bill heron and sacred ibis, crocodiles and hippos, and hundreds of thousands of antelopes.

The Sudd is threatened by the Jonglei Canal, which will take water from the Nile and link up important towns. At present, work on the capital is held up by civil war. If it is ever complete, the Sudd may dry up. Local people will lose a vital source of water and grazing land, and the rich wildlife will disappear.

Mississippi River

The Mississippi River together with its main tributary, the Missouri, is the largest river system in North America. The Mississippi-Missouri flows a total 6,019 km and drains an area of 3,221,000 sq km. Every day it discharges 1,600 million tonnes of water into the Gulf of Mexico.

The Mississippi rises in Lake Itasca, west of the Great Lakes, and is itself 3,779 km long. As well as the Missouri, which rises in the Rocky Mountains, other large tributaries are the Ohio River, which starts in the Appalachian mountains, and the Arkansas River. As it flows towards the sea, the Mississippi grows from a clear stream winding its way through lakes and marshes, to a huge muddy river over 2,5 km wide, which wanders in huge sweeping curves across its flood-plain. The huge amount of sediment carried by the river has built up a wide delta pushing out into the Gulf of Mexico near New Orleans, and the river splits into hundreds of tiny rivulets as it meanders over the delta.

In the first half of the 19th century the Mississippi was very important to the economy of the South and Middle West of the USA. Steamboats carried

cargo and passengers, and showboats brought theatre to the waterfront towns. It was a colourful and glamorous period. But after the American Civil War and the coming of the railways the Mississippi never quite regained its former glory.

It is still an important highway for transporting cargoes of iron, steel, coal, petroleum, chemicals and other raw materials and industrial products. In places, the river has been straightened and its banks have been raised to improve the passage of river traffic and hold back flood water. The huge Mississippi flood-plain is over 125 miles wide in places, and covers about 77,720 sq km. The fertile silt brought down by the floods has given rise to valuable farmland.

Amazon River

The Amazon River is 6,440 km long, the second-longest river in the world. It contains more water than any other river in the world – about 25 percent of all the water that runs off the Earth's surface.

The Amazon rises high up in the Andes mountains in Peru, and is fed by about 15,000 tributaries on its way to the sea on the coast of Brazil. The land slopes gently, and the Amazon wanders in great curves called meanders, frequently changing its course as the river bed becomes silted up, leaving behind little horseshoe-shaped lakes and swampy areas rich in birds and other wildlife.

The river contains over 2,000 different kinds of fish, including piranhas, catfish, electric eels and the giant arapaima. The nutrient-rich silt deposited by the river supports vast tropical forests which line its banks, home to millions of different animals and plants.

Thousands of small villages along its banks live off the fish and small plots of land which they clear in the surrounding rainforest. Large ships can travel far inland to cities such as Manaus in Brazil.

4. Answer the questions:

1. When is a river formed?
2. How does a river form?
3. What can water do?
4. What happens when the river enters the still waters of a lake or the sea?
5. Are the flows the same in summer and winter?
6. What causes spring floods?
7. What are the three stages in river's life?
8. What is the length of the River Nile?
9. Is the Nile navigable?

10. What is the largest river system in North America?
11. What do you know about the Amazon River?

5. Are the following statements true or false?

1. A river is formed when water flows naturally between clearly defined banks.
2. The streams which join the main river are called tributaries.
3. A river gets smaller as it flows towards the sea.
4. Rivers do not cut into the land and they do not create valleys and gorges.
5. All the rivers have the same flow in summer and winter.

6. Define to what part of speech the italicised words belong:

1. *Water falls* upon the earth as rain, snow and hail.
2. One can find many *waterfalls* in the reaches of the Dnieper.
3. High mountains *bar* access to the cold blasts from the north.
4. "Limans" are flooded river mouths which now constitute shallow lagoons nearly closed off by sand *bars*.
5. The molten matter solidifies before it *reaches* the earth's surface.
6. Frequent storms prevent the formation of pack ice in the upper *reaches* of the river.

7. Speak about some river using:

to rise in, to attain, to be marked by, gentle (steep) slopes, slow flow, to freeze, to drain, depth, width, upper (lower) reaches, middle course, mouth, as a rule, because of, volume of water, to carry, to supply, to feed, melting snow, hydroelectric development.

Unit 7. Valleys

1. Read and learn the following words:

ridge	- гірський хребет
rock	- порода
gradient	- складова частина
sandpaper	- піщаний папір, шкірка
picturesque	- мальовничий
thunderstorm	- гроза

porous	- пористий
rift valley	- долина з крутими схилами
avalanche	- лавина

2. Read aloud the following word combinations and translate them:

carves out valleys, roll down the valley, flowing around obstacles, U-shaped, appear almost flat, to benefit from extra moisture.

3. Read and translate the text:

Valleys

Valleys are formed by the action of rivers or glaciers, wearing away the rocks. As the water or ice flows down from the mountain tops it carves out valleys, leaving ridges of rock in between and giving the mountains their shape.

Rivers flowing down steep gradients (slopes) have great cutting power. Rocks and boulders roll down the valley sides into the river and are bounced along its bed, cutting deep into the rocks. River valleys high in the mountains are steep-sided. If you see them in cross-section, they look V-shaped.

Further down the river course, the gradient of the river bed is less, the river flows more slowly and cuts less deeply. It develops a more winding course, flowing around obstacles and cutting a wider valley, like a shallow U. The river flood-plain has a very slight gradient and may appear almost flat. Some river flood-plains are hundreds of miles wide.

Glaciated valleys

Glaciers can erode valleys much more powerfully than rivers. The ice may be hundreds of feet thick, so a great weight presses down on the valley floor. Rocks and boulders become stuck in the ice on the bottom of the glacier. The ice pushes them along like a giant piece of sandpaper. Glaciated valleys are U-shaped in cross-section, with very steep sides and flat bottoms. After the ice has melted, the rivers that flow down these valleys look much too small for them.

Where tributary glaciers enter the main valley they form "hanging valleys". Because these glaciers are smaller, their valleys are not cut so deep. They are seen high up the main valley sides. Picturesque waterfalls often cascade from these hanging valleys after the ice has retreated.

Where the river follows a line of weakness in the rocks, such as a fault, it may cut a very deep valley with almost vertical sides, called a gorge. Gorges also form in desert areas where rainfall occurs very rarely in the form

of heavy thunderstorms. The soil has been baked hard by the Sun and very little water can soak in, so huge volumes of water run off the surrounding land, forming "flash floods" so powerful that they carry large boulders with them and cut deep gorges called wadis.

Some of the most spectacular gorges are the canyons of the United States, including the Grand Canyon, 1,5 km deep.

Dry and drowned valleys

In some parts of the world, especially where there is limestone or chalk, there are valleys which contain no water. These dry valleys were formed at a time when the climate was much wetter, as at the end of the last ice age. Their rocks are very porous, and water quickly sinks down into them. When there was more rainfall, the water level in the rocks remained above the valley floor, so the rivers flowed. Today, the water is much deeper and only underground rivers occur.

Where coastlines are sinking or sea-levels rising, valleys may be drowned, forming long inlets of the sea called rias. Rias are found on the south-west coast of England. Where deep glaciated valleys are drowned, they form fjords with very steep sides and extremely deep water, as in Norway.

Rift valleys

Some of the widest valleys in the world are the rift valleys. These were formed when huge blocks of rock moved relative to each other: either the blocks on either side of the valley were raised up to form mountains, or the block in the middle dropped down to form the valley floor. The great Rift Valley of Africa and the Great Glen of Scotland were formed in this way.

Valley settlements

In mountain regions the valleys are the main areas where people live. This is because the climate is milder and the soils are thicker. The valleys provide routes for roads and railways, and larger rivers can be used for transport, too. Large settlements often occur where one or more valleys meet, encouraging trading.

Where springs emerge on the valley slopes there may be a line of villages which date back to times when spring water was the main source of water for drinking. In valleys with fair-sized rivers water power may be used to generate electricity for industry.

Communications between valleys may be difficult in mountain country. Roads and railways have to climb winding mountain passes, or pass

through expensive tunnels. The hills may also interfere with radio and television reception.

Life in valleys

A valley floor is lower than the hilltops, so the climate here is warmer. The valley sides provide shelter from wind: often the mountains themselves receive much of the rainfall and snowfall, leaving the valleys short of rain. South-facing valley slopes get more light and are usually warmer than north-facing slopes, and often have different vegetation.

In some valleys there are special mountain winds which blow down the valley bringing warm or cold air at certain times of year. When frost and fog form, the cold air sinks, and valleys often have more frost and fog than the mountains above.

In high mountain valleys the soils are usually thin and not very fertile. Sheep farms are more common than crops. On very steep slopes, farmers may build terraces to prevent the water and soil rushing away down the slope. Where there is no farming the slopes may be wooded. The trees help to anchor the soil and prevent it being washed away in heavy storms. They also help to prevent avalanches of snow or mud crashing into the valley and villages below. There are often trees and shrubs near the river, benefiting from the extra moisture.

In lowland valleys flooding caused by seasonal rainfall or melting snow may be a problem. But farmers need the rich silt that is left behind by the floods. In valleys near the river mouth the soil is even thicker. Good crops can be grown in the fertile sediments dropped by the river.

Where forests have been cut down in the hills, flooding may be much worse. With no trees to soak up the water, more often rushes straight into the rivers, together with the soil.

4. Answer the questions:

1. How are valleys formed?
2. What do river valleys in the mountains look like?
3. What form are glaciated valleys?
4. What are "hanging valleys"?
5. What is gorge?
6. Where do gorges form?
7. What is the depth of Grand Canyon?
8. Are there valleys without water?
9. What are rias?
10. Where can you see rift valleys?

5. Are the following statements true or false?

1. Valleys are formed by the action of rivers and glaciers.
2. Rivers erode valleys more powerfully than glaciers.
3. There are valleys without water.
4. Rift valleys are the narrowest in the world.
5. Communications between valleys are easy.

6. Translate into English.

Азія – найбільший зі всіх континентів. Вона займає майже 1/3 суші світу. За винятком декількох островів, вона лежить виключно в Північній півкулі. Азія простягається від замерзлих берегів Арктичного океану, а її південна частина майже доходить до екватора. Деякі частини Центральної Азії знаходяться більш ніж за 1500 миль від моря.

7. Translate paying attention to the translation of some verbs with different prepositions:

1. Rivers *carry* a load of sand and mud.
2. They *carry on* their work under hard conditions.
3. The rivers *carry along* stones and sand.
4. The wind loosens and *carries away* the soil.

Unit 8. Lakes, Oceans and Seas

1. Read and learn the following words:

hollow	- западина
desert	- пустеля
current	- течія
meteorite	- метеорит
artificial dam	- штучна дамба
concrete	- цемент
clockwise	- за годинниковою стрілкою
counterclockwise	- проти годинникової стрілки
hemisphere	- півкуля
chalk	- крейда

2. Read aloud the following word combinations and translate them:

man-made barriers, sooner or later, sediments left behind, extinct craters, a ridge of mountains, trade winds.

3. Read and translate the text:

Lakes, oceans and seas

Lakes are areas of water surrounded by land. They occur where water collects in hollows in the Earth' surface, or behind natural or man-made barriers.

Lakes don't last forever. The water may cut through the barrier, so the lake drains away. Sooner or later most lakes fill up with sand and mud. As a river enters a lake, the water flows slower and drops its load of sediment. Plants grow in the sediment, trapping more sand and mud.

Lakes also disappear if more water flows out of them or evaporates than the rivers bring in. When a desert lake evaporates, the dissolved salts and sediments are left behind and gradually fill up the lake, which becomes very salty. The Caspian Sea is like this. It has shrunk drastically as more and more irrigation water has been taken from the Volga and Ural rivers which feed it.

A crater lake is one which lies in the natural hollow of an old volcano. The Eifel district of north-west Germany has hundreds of lakes lying in extinct craters. One of the rarest crater lakes is Lake Bosumtwi in the Ashanti Crater in Ghana. The crater was probably made by a meteorite.

Glacial lakes form where ice-sheets and glaciers have left the ground very uneven. They scraped and hollowed out hard rock or dumped sand, gravel and clay in uneven layers. Finland is a country of such lakes. Northern Canada and north-west England have similar lake districts.

Rift valley lakes are long thin lakes such as Lake Malawi, Lake Turkana and Lake Tanganyika in East Africa, the Sea of Galilee in Israel and the Dead Sea between Israel and Jordan. When the Earth's crust slipped down between long lines of faults, the water filled part of the valley floor.

Artificial dams have created lakes. People have built earth, stone and huge concrete dams to hold back rivers for water supply, irrigation or hydroelectric power. Lakes may form in disused gravel pits and mines. Often they are used for leisure and water sports, or to attract wild birds.

Probably the most famous of all lakes in volcanoes is the Crater Lake in Oregon, USA, which is 9 km across.

Largest lake.

Caspian Sea, 371,000 sq km

Largest freshwater lake.

Lake Superior, 83, 270 sq km (border of Canada and USA)

Deepest lake.

Lake Baykal, 1,741 m deep

Highest navigable lake.

Lake Titicaca, 3,811 m above sea-level (in the Andes of Peru and Bolivia)

Largest temporary lake.

Australia's lake Eyre, a desert lake 9,300 sq km in area. It disappears completely after a few dry years.

Oceans and seas. The five major oceans are the Arctic, Atlantic, Pacific, Indian and Southern Oceans. They are connected to each other by open water. Water slowly circulates between them in currents at the surface and deeper down. The oceans contain about 1,370 million cubic km of water altogether. The average depth of this water is 4,000 m, but in some ocean trenches it may be 11,000 m deep.

The ocean floor has a landscape of its own. Much of the deep sea-bed is a flat plain. But in places, mountains rise thousands of metres from the sea-bed, sometimes pushing through the sea's surface as islands. Many of these are active or extinct volcanoes. Running down the centre of the ocean floor in several of the oceans is a ridge of mountains which is continually being built up by outpourings of lava. As the rock is forced outwards from the ridge by the new lava, the ocean floor spreads until it reaches the boundaries of the continents. At the edge of each continent is a shallow shelf which slopes gently down to about 200 m, then dips steeply down, in some cases to a deep trench which marks the point where the ocean floor is being forced under the continent.

Much of the ocean floor is covered in sand or mud brought in by rivers. In places, hot springs bubble up, depositing sulphur and other minerals. Millions of microscopic plants and animals live in the surface waters. When they die, their glassy or chalky shells sink down to the bottom to form a sediment. Here, the pressure of other sediment layers slowly turn the sediments into rocks. Future upheavals of the Earth's crust may one day fold these rocks into new mountain ranges and new land.

The water in the oceans is constantly moving, driven by winds, waves, tides and currents. It may be moving in different directions and at different speeds at different depths. Where the wind blows from the same direction for most of the year, it is able to move large volumes of water, forming surface currents. But the spinning of the earth on its axis makes these currents turn to the right in the northern hemisphere, and to the left in the southern hemisphere. So, the surface currents move in giant circles called gyres.

If you mix oil and water, the oil floats on the top because it is less dense than the water. Warm water is less dense than cold water, and salty

water is denser than fresh water. In the oceans, cold or salty water sinks, and this sets up deep currents.

In the tropics, the warm surface waters are pushed into two great west-flowing currents by the north-east and south-east trade winds. Between them, the equatorial counter current flows in the opposite direction to compensate. Where these currents reach the continents, the rotation of the earth forces them into clockwise circles in the northern hemisphere, and anticlockwise circles in the southern hemisphere.

Nearer the poles, these circular currents meet cold water flowing from the melting ice, and return to the equator as cold currents. Where cold water wells up from the deep ocean, it brings nutrients which support large stocks of fish. Warm and cold currents also affect the climate of coastal countries.

Waves are caused by wind blowing over the surface of the water, pushing against ripples and making them bigger. The water in a wave does not move from place to place. Each water particle moves in a circle, up and forward on the wave crest, then down and back as the wave passes. The longer and stronger the wind blows, and the greater the distance over which it blows, the higher will be the waves. Big waves are further apart than small waves and move faster.

4. Answer the questions:

1. What is a lake?
2. Do lakes last forever?
3. What happens when a desert lake evaporates?
4. What country is an example of glacial lakes?
5. What are the largest lakes?
6. Name the major oceans.
7. What is the average depth of the oceans?
8. What is the ocean floor covered in?
9. Is the water in the oceans moving?
10. What are waves caused by?

5. Are the following statements true or false?

1. Lakes are areas of water surrounded by land.
2. Lakes last forever.
3. Lakes disappear if more water flows out of them than the rivers bring in.
4. The Caspian Sea has not changed.
5. Artificial dams have created lakes.

6. Translate paying attention to the translation of "some" and "same".

1. All the planets revolve about the sun in the *same* direction.
2. In time *some* cracks increase in size and the rock breaks up into small pieces.
3. The line joining on a map all places with the same atmospheric presuure we call an isobar.
4. All the lower atmosphere contains *some* water vapour.
5. The earth's axis is always inclined in the *same* direction.
6. Scientists believe that there is *some* air at the height of 200 miles.

7. Translate into English:

Африка – другий за величиною материк після Євразії. Його площа разом з островами дорівнює 30,3 млн кв. км. Біля берегів Африки мало островів, тільки один острів – Мадагаскар – займає значну територію. Береги Африки порівняно з іншими материками слабо порізані. Тут є тільки одна велика затока – Гвінейська, яка мало врізається в сушу, і лише один великий півострів – Сомалі, який виступає в Індійський океан. В Африці мало бухт, зручних для будівництва портів.

Unit 9. Rocks

1. Read and learn the following words:

igneous rocks	- вивержені породи
molten liquids	- розплавлені рідини
sandstone	- піщаник
mudstone	- аргіліт
limestone	- вапняк
metamorphic rocks	- метаморфічні породи
quartz	- кварц
in random arrangement	- безладно
impurity	- домішка

2. Read aloud the following word combinations and translate them:

readily dissolved mineral matter; under great stress; deep within the earth; going on all the time; highly developed continental area; largely eroded mountain ranges; generally crystalline metamorphic rocks; nearly vertical mountain slope; readily eroded mineral particles; nearly flat summit area; highly efficient natural fuel.

3. Read and translate the text.

Rocks

There are three main types of rocks. Igneous rocks are formed at very high temperatures from molten liquids, either deep within the earth, or at the surface, from volcanoes, for example. Sedimentary rocks are formed from sand, mud, or limy mud, laid down on land or in ancient rivers, lakes or seas. These form sandstone, mudstone and limestone. Metamorphic rocks are formed from either sedimentary or igneous rocks that have been buried and heated up or put under great stress.

Igneous rocks

Igneous rocks are generally very hard, because they are formed from a molten mass of rock material called magma. The magma, which can be seen on the surface of the Earth as lava, consists of complex mixtures of chemicals. As the magma moves through cracks in the Earth's surface, it cools around the edges. It may cool completely deep within the earth, or at the surface.

The kind of igneous rock formed depends on the composition of the magma and the rate at which it cools. On cooling, the chemicals in the magma form crystals. These crystals, like grains of salt or sugar, have particular shapes depending on their chemical composition, and the longer it takes them to cool, the larger they become. The solid crystalline forms are called minerals.

Igneous rocks formed deep in the Earth's crust are called plutonic rocks. A common type is granite, which contains many large crystals of the common mineral quartz. Igneous rocks formed nearer the surface in dikes or sills include dolerite, which contains smaller crystals of other minerals, but hardly any quartz. Igneous rocks which are formed at the surface are called volcanic rocks. They include basalt, a common rock type which is more fine-grained than dolerite because it cooled faster at the surface.

Only a small proportion of the molten lava which forces its way up through the Earth's crust eventually solidifies on the surface. Most cools within the crust, squeezed between existing rocks. The strange shapes that cool underground are often exposed millions of years later, as weathering wears down the surface of the earth.

Sedimentary rocks

Sandstones, mudstones and limestones were once sands and muds on the bottom of rivers, lakes and seas. These sediments form part of the great cycle of erosion and deposition that is going on all of the time. The rocks on land are eroded by the action of rain, streams, wind, ice and plant roots. Small rock fragments in the form of sand or mud are blown away or washed down into rivers or lakes where they may sink to the bottom. Over the years, millions of sand grains may be deposited in one place, and thick layers build up.

The largest areas of deposition are in the sea. Sediment is brought in from all the great rivers, and it is also eroded from coastlines by the sea itself. These grains of sand and mud may be deposited in shallow coastal waters, or they may be swept well out into the oceans. Over millions of years, the sediment may build up to be many hundreds of metres thick.

From sediment to rock

For the sediment to form rock, two main changes take place. First of all, water is lost. As the layers of sediment build up, the deeper sediment is pressed down by the weight of sand or mud above. The grains press closer together, and water moves up into the lake or sea above.

The second stage is the formation of a kind of cement. After many years, sometimes thousands of years, the remaining water around the grains contains solutions of minerals. Further loss of water causes these mineral solutions to form crystals in the spaces between the rock grains.

Metamorphic rocks

The word metamorphic means "later, or changed, form". These are rocks which have been altered either by heat, or by heat and pressure together.

When magma forces its way up in the Earth's crust, it heats the surrounding rock for a distance of several metres. If it is passing through sandstone, this may be baked into hard quartzite. Limestone may be baked into marble. This type of metamorphism can affect only small amounts of rock close to the passage of the magma.

Large-scale metamorphism can take place when mountains are forming. For example, when major plates of the Earth's crust collide, there are great pressures, and ocean-floor sediments like mudstones and sandstones may be altered over wide areas to form slates and schists. Both pressure and heat are involved.

When a metamorphic rock forms, the pressure forces all the crystals in a rock to line up. In mudstones and sandstones, all the mineral crystals lie in a random arrangement. When great forces act on these rocks, the grains line up at right angles to the direction of the pressure.

New minerals are often created by metamorphism. The great heat can melt the original rock into a liquid, and impurities may then come together and form new minerals such as tourmaline or garnets on cooling. A very unusual example of this is the formation of diamonds in coal layers which have been heated by igneous rocks.

Gneiss is a coarse-grained rock with irregular bands of different colours. Gneisses often glitter because they contain the mineral mica. They were formed from rocks changed by great heat and pressure.

Slate is made from clay rocks transformed by heat and pressure. The most distinctive feature of slate is its fissility – the ability to split cleanly into thin sheets. It is best known as a material for roofing.

Slate splits into thin sheets. However, cutting roof slates by hand is skilled work. Fewer stonemasons have this skill today as roofs are more usually covered with clay tiles.

Marble is made from limestones changed by great heat and pressure. The colours and patterns in marble depend on the type of limestone from which it was formed. Pure white limestone formed the valuable Carrara marble from Italy, which sculptors, such as Michelangelo, used.

4. Answer the questions:

1. What are the main types of rocks?
2. How are igneous rocks formed?
3. How are sedimentary rocks formed?
4. What do sedimentary rocks form?
5. How are metamorphic rocks formed?
6. What is magma?
7. What are minerals?
8. What are plutonic rocks?
9. What changes should take place for the sediment to form rock?
10. What creates new minerals?

5. Are the following statements true or false?

1. Igneous rocks are formed at very high temperature.
2. Metamorphic rocks are formed from sedimentary rocks.
3. Magma is homogeneous.
4. The rocks on land are eroded by the action of rain, wind, ice and plant roots.
5. New minerals are never created by metamorphism.

6. Describe the Mediterranean Sea giving its origin, depth, coast line, principal inlets, economic value.

7. Think of the meaning of the infinitives formed from the nouns you know. Translate the sentences below:

stretch – to stretch;

range – to range;
lack – to lack;
trade – to trade;
mine – to mine;
bar – to bar.

1. Thick forests *stretch* to the foothills of the mountains.
2. The surface temperatures in the open ocean *range* from 28°F in the polar seas to 86°F in tropical waters.
3. The northern shores *lack* the advantages of the western ones.
4. Our country *trade*s with many foreign countries via the Black Sea.
5. They *mine* coal on the western slope of the mountain.
6. High mountains *bar* access to the cold winds from the north.

Unit 10. Soil

1. Read and learn the following words:

soil	- ґрунт
particle	- частинка
substance	- речовина
coated	- покритий
film	- плівка
decay	- гниття
sample	- зразок
parent rock	- материнська порода
leaching	- вилуговування

2. Read aloud the following word combinations and translate them:

nearly vertical mountain slope; readily eroded mineral particles; nearly flat summit area; highly efficient natural fuel; generally issued scientific methods; largely sedimentary rock fragments; deeply intended northern islands; generally frozen arctic seas.

3. Read and translate the text.

Soil

Soil is formed when rocks are slowly broken down by weathering (the actions of wind, rain and other weather changes). Plants take root among the rock particles. The roots help to bind the particles together, and protect them from rain and wind. When the plants die, they decay and produce a dark

sticky substance called humus. The humus sticks the soil particles together and absorbs water.

The soil environment

Soil is made up of a mixture of rock particles of various sizes, with air spaces between them. The particles are coated with humus and a thin film of water. The larger the soil particles, the bigger the air spaces between them and the faster water drains out of the soil. The air spaces are important for plants because their roots need oxygen to breathe. The humus supplies minerals to the plants as it decays.

Soil profile

Different kinds of parent rock and different climate produce different kinds of soils. You can see this by looking at soil profiles. A soil profile is a sample taken from the surface down through the soil. Each profile is divided into a series of layers called horizons.

0 horizon, the surface layer, contains many plant roots and soil animals. It is rich in dark – coloured humus.

A horizon still has a lot of humus, but is a paler, greyish colour because many of the minerals have been washed out by rainwater, a process called leaching.

B horizon contains much less humus, but some of the minerals washed out of the A horizon are deposited here. If the soil is not too wet, any iron left here will oxidise, producing a yellow or reddish brown colour.

C horizon is where weathering is taking place, and the parent rock is broken down.

R horizon is the parent rock.

Fossils

How do fossils form?

The commonest sorts of fossils show us the hard parts of the ancient plant or animal. The hard parts include the materials making up shells and bones, which do not rot away. Fossils are formed in several stages, from the body of a dead animal, or from a whole plant, or from parts of a plant.

Imagine many shellfish living on the sea-bed in shallow water. Some of them may burrow into the sand on the sea-bed, while others move about on top of the sand, and some may be fixed to boulders. A great storm could whip several metres of sand over them all, and kill them before they could escape.

Within a few weeks, all of the soft insides of the shellfish will rot away, or be eaten by creatures that burrow through the sand. Over a few

thousands of years, more layers of sand may be dumped on top, and water may be forced upwards by the weight. The sand settles, and it may eventually form a rock called sandstone, in which all the grains are firmly stuck together.

The shells are deep inside the sandstone. Mineral solutions may pass through the sandstone, and some of these harden the rock and the fossils. The space inside the shells, where the soft parts were, may also fill up with crystal deposits from these mineral solutions, so that the shells are literally turned to stone or rock.

After millions of years, the coastline changes and the sandstone is on dry land. The landscape is cut down by wind and rain, or a stone quarry is dug. The ancient shells are found as fossil shells.

Fossils are the remains of plants and animals that once lived on the Earth. Often they show only a part of the plant or animal, usually a hard part, such as a shell or a bone.

Common fossils

The commonest fossils are ancient sea shells. This is because most of the rocks that contain fossils were laid down in the sea, and because shellfish have always been very common. It is easy to find other sea creatures. For example, the Ordovician and Silurian mudstones of many areas contain fossil graptolites (animals which floated near the sea surface), while limestones of the same age contain corals and brachiopods (a particular group of shellfish which look like common clams and mussels, although they are not related).

In some areas of Devonian-age rocks, fish are actually the commonest fossils. In coal-mining areas the most common fossils are the Carboniferous – age plants that make up the coal. If you look at common non-shiny coal (not anthracite) in big lumps, you should be able to see twigs, stems, and fern-like leaves. In those days there were warm seas in many parts of the world; if you live near some carboniferous limestones, you may find that they are full of big corals, brachiopods, sea lilies, and other coral-reef life.

Permian and Triassic rocks were generally laid down on land, and fossils are not so easy to find. Marine rocks of Jurassic and cretaceous age are often full of shellfish, such as oysters and the coiled ammonites which swam above the sea-bed. These rocks may also contain the bones of sea reptiles. Dinosaur fossils are mainly Jurassic and Cretaceous in age, but they are not so easy to find as the shellfish that lived at the same time. This is because dinosaurs lived on land and they are preserved as fossils only if their remains ended up in the sea or at the bottom of a lake.

More recent rocks, of Cainozoic age, often contain very rich shell-beds if they were laid down in the sea or in the lakes, and fossil fish and mammals may also be found in some places.

Unusual fossils

The rarest and most exciting fossils show us the soft parts of long-dead animals. These include insects in amber. Amber is solid resin which oozes from the bark of certain kinds of trees, and it sometimes traps insects and other small creatures. Every detail can be seen, since the bodies of these animals have not decayed at all.

Very rare are whole mammoths which have been deep-frozen for thousands of years in the frozen soil of Siberia. The flesh is often preserved very well, and scientists have even eaten mammoths steaks! We can tell from preserved mammoth hair that they were coloured red.

Trace fossils are fossilised animal droppings, footprints and burrows. Many museums have fossil trackways made by dinosaurs. We can tell how big the track-maker was, and how fast it was going. Commoner trace fossils include burrows and crawling marks made by ancient sea creatures. These can be very important to scientists, since they are often the only evidence they have that certain soft-bodied animals existed.

4. Answer the questions:

1. When is soil formed?
2. What do roots help do?
3. What is soil made up of?
4. What is a soil profile?
5. How many horizons do you know? Name them.
6. What are fossils?
7. What are the common fossils?
8. What are unusual fossils?

5. Are the following statements true or false?

1. Soil is formed when rocks are slowly broken down by weathering.
2. Soil is homogeneous.
3. The air spaces are not important for plants.
4. Fossils are the remains of plants and animals that once lived on the earth.
5. Fossils are formed in several stages.

6. Find in A equivalents from B:

A	**B**
земна кора	sandstone
розчинитися у воді	igneous rocks

пісковик	the Earth's crust
вивержені породи	to dissolve in water
мілкозернистий пісок	to solidify
затвердіти	like gypsum
подібний до гіпсу	fine-grained sand

7. Translate into English:

1. Земна кора складається з вивержених, осадових та метаморфічних порід.

2. Осадові породи формуються завдяки дії води, тепла, холоду й органічних речовин.

3. Як відомо, кам'яна сіль формується під упливом осідання мінеральних речовин. Ці речовини розчиняються у воді.

4. Вугілля використовують як паливо.

Unit 11. Deserts

1. Read and learn the following words:

unreliable	- ненадійний
semi-desert	- півпустелі
flood	- повінь
tropic of Cancer	- тропік Рака
tropic of Capricorn	- тропік Козерога
dew	- роса
dawn	- світанок
mesa	- столова гора
nomads	- кочівники

2. Read aloud the following word combinations and translate them:

the contraction and expansion of rocks; the destructive action of water; the solvent action of water; under the influence of heat; fine-grained sand; at an equal rate; external and internal forces; hard conditions; the Earth's surface; the layers od oil; physical and chemical weathering; the consolidation of sediments; considerable transformation.

3. Read and translate the text.

Deserts

Deserts are dry: geographers say that a desert is an area which has less than 250 mm of rain in an average year. But what is an average year? Rainfall is very unreliable in deserts and semi-deserts. A place may have heavy storms and floods one year, then no more rain for many years. It is impossible to draw the boundary of a desert. There is a very gradual change from almost no rain in the true desert to a short rainy season in the semi-desert.

Most deserts lie near the tropics of Cancer and Capricorn. These are the hot deserts, where the Sun shines down relentlessly from a cloudless sky. But during the night, the clear skies allow heat to escape and it can become surprisingly cold. Dew sometimes forms by dawn. The deserts of Central Asia are not near the tropics. They are far inland, where the winds are dry. Deserts such as the Gobi are hot in summer, but very cold in winter.

Only about a tenth of the Sahara desert is sandy, and most other deserts have even less sand. Large areas are stony, such as the "gibber" deserts of central Australia. Deserts contain mountains, some of which have been eroded into weird shapes, such as the flat-topped mesas of Arizona in south-west USA. Many of the strange-shaped rocks are the result of wind erosion. The wind can also pile up sand into dunes. As sand blows up the side of the dune and rolls down the steep face, the dune gradually moves, and may bury oases and buildings.

Water is important in shaping the desert. Even a little dampness on rocks helps break them up when there are big changes in the temperature between day and night. Storms may not happen very often, but when they do, they sweep down the wadis (dry valley) and flood over the land. Steep-sided gorges and great spreads of rock and gravel are the result of water erosion. When the storm is over, the water soon dries up, and some lakes become salt-flats.

Nomads who wander in semi-desert areas have developed special skills for finding water to survive. The Bushmen of the Kalahari live off the native plants and animals. The Bedouin of the Middle East graze herds of camels.

Today, there are probably more people than ever living in desert. Once, the only permanent settlements were in the oases and in the valleys of rivers like the Nile which flow through the desert. But people have made their own oases where valuable minerals are found. Deep wells, pipelines and even lorries supply water for settlements near the oil wells and mines in many desert areas.

Many desert animals survive by sleeping during the heat of the day and coming out to find food at night. Many live underground where heat and cold do not penetrate. Some "aestivate": they sleep through the hottest part of the year. Plants, too, may become "dormant" or inactive then, shedding their

leaves to save water and surviving just as underground roots or stems, or as seeds.

Animals such as the kangaroo rat and gerbil can survive with little or no water. Desert toads and tortoises may store water in their bladders. Camels do not store water in their humps, but they can go for several weeks without drinking: they can drink enormous volumes of water in one go. Many desert plants store water in fleshy leaves. Cacti store water in their fleshy stems, which have thick skins to reduce evaporation. After rain, a cactus swells, then gets thinner as it uses the water. As its stem shrinks it forms deep pleats. As well as deep roots, it has many shallow ones to catch as much water as possible before it evaporates. Cactus leaves have evolved into spines. These reduce water loss and also protect the cactus from being eaten.

4. Answer the questions.

1. What is a desert?
2. Is rainfall reliable in deserts?
3. Where are most deserts located?
4. Is the whole of Sahara desert sandy?
5. What is important in shaping the desert?
6. What skills have Nomads developed?
7. How do desert animals survive?
8. How do desert plants survive?

5. Are the following statements true or false?

1. Deserts are wet.
2. Most deserts near the tropics of Cancer and Capricorn are hot.
3. The Sahara desert is moist.
4. Water is important is shaping the desert.
5. Water is easy to find in the desert.

6. Fill in the gaps by choosing one of the words in brackets.

1. Rocks are … composed of different minerals *(purely, easily, generally).*

2. The expansion and contraction of rocks do not occur … and at an equal rate *(hardly, uniformly, highly).*

3. Rocks are … transformed into gravel *(greatly, slowly, simultaneously).*

4. Water facilitates the decomposition od rocks … *(greatly, hardly, highly).*

7. Find in A equivalents to B:

A	B
The Earth's surface	- вивітрювання
To be composed of different minerals	- під упливом жари
Changes in temperature	- рушійні сили
Under the influence of heat	- зміни температури
Weathering	- складатися з різних мінералів
Destructive forces	- проникати в тріщини
To penetrate into fissures	- поверхня Землі

Unit 12. Forests

1. Read and learn the following words:

undergrowth	- поріст
rainforest	- тропічний ліс
humid	- вологий
crown	- крона
canopy	- купол
shrub	- кущ
fungus	- гриб
orchids	- орхідея

2. Read aloud the following word combinations and translate them:

covered in forest, destroyed by human activity, annual rainfall, cast a shade, patch of light, encourage lush growth, shield the forest interior, continuous canopy, carpet the forest floor, branching crowns, shed the leaves.

3. Read and translate the text:

Forests

A forest is a large area of land covered mainly with trees and undergrowth. Some forests, such as the great Amazon rainforest, have existed for thousands of years. Although vast areas of forest have been destroyed by human activity, 20 percent of the world's land remains covered in forest, both natural and specially planted.

Forests can grow wherever the temperature rises above 10 degrees C in summer and the annual rainfall exceeds 200 mm. Different climates and soils support different kinds of forests; for example, conifer forests grow in cold climates, and rainforests grow in the humid tropics.

Forests create their own special environments. The crowns of the tallest trees cast a shade on the forest floor. Where a large tree falls, the new patch of

light encourages lush growth of vegetation, including the seedlings of more trees. There is little wind inside a forest. Trees draw up water from the soil, and some of it later evaporates from their leaves, so the air in a forest is still and moist.

The trees shield the forest interior from the full strength of the Sun, and also prevent heat being lost into the sky at night. So the temperature inside the forest does not vary so much as outside. The days are cooler, and the nights warmer, making the forest a sheltered place for wildlife.

A forest has a definite structure. The larger tree species have branching crowns which form an almost continuous canopy over the roof of the forest, allowing only small shafts of sunlight through. In tropical forests a few very tall trees, called emergents, grow through the canopy into the sunlight above. Below the canopy are smaller trees and the young saplings of taller trees. These form the understorey. Below them are shrubs and briars, and on the forest floor a layer of smaller shrubs and plants.

Tropical rainforest

Here temperatures are high and the air is moist all year round. The rainforest has such a dense tangle of vegetation that it is often difficult to distinguish the various layers. Plants, such as orchids, even grow on the trunks and branches of trees and fallen logs. There are so many different kinds of trees that there may be two or even three layers of understorey, formed by different species. Climbing figs, vines and lianas dangle from the branches high in the canopy. Herbs and shrubs carpet the forest floor. Leaves and fallen trees rot quickly in the moist, warm atmosphere, aided by many different fungi.

Deciduous forest

These forests are found in temperate climates. The main tree species are deciduous, which means that they shed their leaves in winter, or in the dry season. For part of the year the forest floor receives plenty of light, so herbs may flourish there. Many put out their leaves while the trees are still leafless. These forests have strong seasonal patterns of producing leaves, flowers, fruits and nuts. The understorey may include occasional evergreen trees and shrubs, such as holly and yew. Ivy, honeysuckle, clematis and other shrubs and herbs may climb or twine up the trees towards the light.

Coniferous forest

Coniferous forest is found further north and higher up mountain slopes than any other kind of forest. The main trees are conifers (cone-bearing trees) such as pines. Most are evergreen, with narrow leaves coated in shiny wax to reduce water loss, which would otherwise be high on windswept mountain slopes. They can also survive drought and the freezing of soil water in winter. Their branches slope downwards, so snow easily slides off. The dense canopy

lets very little light through, so few plants grow beneath it, and there is a thick layer of dead leaves.

Forests provide shelter and food for many animals. Leaves, flowers, fruits, seeds and nuts are food for insects, birds and small mammals, such as squirrels and mice, which in turn are food for larger birds and mammals. The moist forest soil has its own community: worms, centipedes, beetles, ants, and the eggs and larvae of many insects. Hollow trees, crevices under roots and bark, and the soil provide sites for nests and burrows. The forest is a noisy place, because visibility is poor among the trees and animals use calls and smells to communicate with each other.

Different layers of the forest have their own special communities. Birds, squirrels and, in tropical forests, monkeys, mice, and some small marsupials and lizards use their tail as a fifth limb, curling it around branches.

Moors and heaths are open treeless areas which were originally covered by forests. Over the centuries people cut down the forests to provide grazing for their animals. The grazing animals then prevented the trees from returning. Heaths are covered in low-growing heather-like shrubs, while moors are made up of coarse grasses and sedges. If grazing is very heavy, heaths turn into grassy moors. Heaths can become very dry in summer and fires are common, caused either by lightning or by humans. Without fires or grazing, trees and shrubs would soon return to heaths and moors.

Heaths

Heaths are found on acid soil. When the soil was covered in forest, the fallen leaves soon rotted into it, adding nutrients and making it less acid. Without the trees, the nutrients were soon washed away, leaving acid soil poor in nutrients. Heath plants grow very slowly, so do not need lots of nutrients. Very few bacterial can live in this soil, so plant material does not rot away, and forms peat.

Heaths are harsh, windswept places. Heathers and their relatives are low-growing woody shrubs. They have very small leaves covered in shiny wax to prevent them losing too much water by evaporation. Heathland plants produce juicy berries such as cranberries and blueberries, popular for making jams, jellies and pies.

Heaths are often used for grazing sheep. The tender young heather shoots make good fodder, and farmers often deliberately set fire to the heath from time to time to encourage new growth. Grouse rearing is also a profitable use for heaths.

Moors

Grassy moors are found mainly on slate and shale. Water cannot penetrate these rocks, so the soil here is waterlogged most of the time. Waterlogged soils do not have many bacterial to rot down the plant material, so moors also build up peat. The peat itself tends to hold water, making the soil even wetter. The coarse grasses that grow here often form large tussocks (clumps), separated by wet boggy patches.

4. Answer the questions:

1. What is a forest?
2. How long can a forest exist?
3. How much of the world's land is covered in forest?
4. What conditions are necessary for the forest to grow?
5. What is the structure of a forest?
6. What is a tropical rainforest?
7. Describe deciduous forest.
8. Describe coniferous forest.
9. What are moors?
10. What are heaths?

5. Are the following statements true or false?

1. Great Amazon rainforest is young.
2. Forests create their own special environments.
3. Light encourages lush growth of vegetation.
4. Deciduous forests are found in tropics.
5. Heaths are found on acid soil.

6. Define to what part of speech the following words belong and translate them:

to prevail – prevailing – prevalent – prevalence; to direct – director – direction – direct – directly; access – accessible – accession – inaccessible; distinct – distinctly – indistinctly; to moderate – moderation – moderating – moderated – moderate.

7. Translate into English.

Тундра – суворий холодний край. Зима тут часто триває 8-9 місяців. З її наближенням дні стають коротшими, а ночі довшими.

У середині зими сонце не з'являється на небі, й настає полярна ніч. На Крайній Півночі полярна ніч продовжується декілька місяців. У цей час величезні простори тундри освітлює лише місяць та зірки.

Зима в тундрі морозна. В деякі дні температура знижується до – 50^0C.

Part 2

Texts for additional reading

I. Read the text and define its main idea.

1. Evapotranspiration

One aspect of the loss of moisture and negative water balances has to do with a combination of processes called evapotranspiration.

Moisture is lost in several different ways. Evaporation from the soil is one process whereby moisture is returned to the atmosphere during the hydrologic cycle's circulation of water, when there is no rain, the soil gives up its moisture to the air and becomes progressively drier, and the dry-soil zone becomes deeper as the rainless days wear on.

At the same time, the roots of plants absorb soil moisture and transfer it through trunks and branches to the leaves. There this moisture collects in the leaf pores and is lost to the atmosphere during a process known as transpiration

The two processes of direct evaporation and plant transpiration are combined as evapotranspiration, since they account for the bulk of the water loss m any unit area (not counting runoff). In combination, the two processes provide a ready measure of the state of the water balance, because it is possible to measure the actual amount of evapotranspiration taking place and to calculate the potential amount of it that would be taking place if ample moisture were available. Obviously, the rate of evapotranspiration is faster where it is warm and slower where it is cool, just as we perspire more profusely when it is hot. When a certain area receives as much as 40 in (100 cm) of rainfall annually, it is important to know how this relates to the rate of evapotranspiration there. In warm subtropical regions, 40 in may be far below the need indicated by measures of potential evapotranspiration. But in the cooler middle latitudes, 40 in of precipitation may be ample.

2. Coriolis

Who was Coriolis, after whom the famous force is named? Gustave-Gaspard de Coriolis was born in Paris in 1792. He studied engineering and mechanics and became a professor teaching at Paris's Polytechnic Institute.

Even though Coriolis was plagued by illness through much of his life, he managed to do some significant research. In 1835, he published a paper in which he showed that existing laws of the motion of bodies are applicable to a rotating condition only when an inertia force is inserted in the formula – a force acting to the right of the direction of motion for counterclockwise rotation, to the left under conditions of clockwise rotation. The significance of that article to studies of meteorology and oceanography was immediately obvious, and the force factor in equations of motion came to be known as the Coriolis factor. Coriolis name is associated even today with calculations in the

field of rocketry. Missile paths require Coriolis adjustment for accurate prediction. Coriolis died in Paris in 1843, but not before he achieved recognition by election to the Academy of Sciences.

3. Clouds

Clouds form when tiny droplets of water (or ice) collect around extremely small dust particles in the atmosphere. These small dust particles are essential, because they serve as the nuclei of condensation. This is true of fog also. A dense city fog often is generated by the high pollutant level in the lower air layer and by radiation cooling.

Cloud types are classified according to their appearance and the altitude at which they occur. *Stratiform* clouds are sheetlike, of wide areal extent, but thin. *Cumuliform* clouds are billowing, tall clouds.

Altitude is signified by prefixes. The lowest stratiform cloud is simply known as *stratus*, or *nim-bostratus* when precipitation falls from it. Above 6500 ft (2000 m) or so, a stratiform cloud is known as *altostratus*. Above about 20,000 ft (6000 m), it is *cirrostratus*. The lowest cumuliform cloud is *strata-cumulus*, or simply *cumulus***,** the middle form is altocumulus, and the highest, *cirro*cumulus. Very-high-altitude streaks of thin cloud are called *cirrus*.

Cumuliform clouds tend to develop to great height. Cumulus clouds, caught up in a convection cell, may develop a base at 1000 ft (300 m) and a head, or *anvil***,** at 33,000 ft (10,000 m) or even higher. When this happens the cloud is identified as a *cumulonimbus***,** signifying that it produces rainstorms and often thunder and lightning along with squalls of high wind.

4. Tornadoes

When a cold maritime polar air mass and a moist, unstable maritime tropical air mass are in contact along an active cold front, it is not unusual to see a line of dense, dark-based cumulonimbus clouds ahead of the advancing cold front. All too frequently, the extreme turbulence associated with the squalls from these clouds leads to one of the most destructive of weather phenomena: a tornado.

A tornado is a small, local cyclone in which air spirals at speeds ranging up to as much as 250 miles (400 km/hour). The tornado is funnel-shaped, and its base usually has a diameter of 100 to 200 yards (some are larger). In the centre of the funnel, the pressure is so much lower than elsewhere that, when it passes over a house with closed windows and doors, the structure may explode. Tornadoes sometimes form in clusters associated with a severe squall line and may travel many miles across a plain, the base

alternately touching the ground and then lifting up, only to touch down again farther along the track. As the giant funnel snakes and writhes along, its base is blackened by the soil, dust, and debris it has picked up. Eventually the squall line weakens and the tornadoes dissipate.

No description could convey the terror and destruction of a tornado, whose power can lift entire sections of buildings and smash them to the ground elsewhere. In the United States, the area of greatest tornado risk lies in the heart of the Great Plains, especially from northern Texas through Oklahoma and Kansas into southern Iowa, but the whole region between the Rocky Mountains and the Appalachians –where air masses of contrasting properties interact – is vulnerable.

5. Hurricanes. Typhoons. Cyclones

Every year, in the tropical oceans between the approximate latitudes of 5^0 and 20^0 north and south, tropical depressions form that develop into tropical storms and, under certain favourable conditions, into *hurricanes* (as they are called in the Atlantic Ocean and in the Pacific east of 180^0), *typhoons* (their name in the western Pacific), and tropical *cyclones* (in the Indian Ocean, especially in the Bay of Bengal).

In one way or another, these storms all begin as cyclones as we know them: low-pressure circulation systems. When such a pressure cell develops into a hurricane, it is almost perfectly circular in shape. It has a steep pressure gradient that leads to a central (core) low where pressure sometimes drops below 950 mb, when standard sea level pressure is 1013.2 mb. This generates an intense air circulation around the hurricane's core, with surface winds reaching 125 miles (200 km/hour) and even higher. The system grows to a diameter averaging 300 miles (500 km), but hurricanes more than twice this large have been recorded. Wind strength increases toward the centre, but the core of the hurricane, its eye, is calm. The eye measures 3 to 9 miles (5 to 15 km) across; here, the air descends from high altitude, is warmed adiabatically, and rejoins the circulation. Temperatures in the eye can be as much as 18°F (10°C) higher than in the other segments of the hurricane.

Hurricanes tend to move slowly and often erratically, although they drift westward and northwestward in the North Atlantic Ocean’s trades and then curve northward and even northeastward as they penetrate the westerly wind belt. This path takes them through the Caribbean Sea; occasionally they curve into the North Atlantic and threaten the U.S. East Coast, but at other times they enter the Gulf of Mexico and strike the coast of Mexico or the Gulf states. In 1965, Hurricane Betsy crossed the Gulf, traversed Florida, and

entered the North Atlantic. Suddenly the hurricane stopped, then reversed its course and struck Florida just south of Miami, re-entering the Gulf of Mexico to batter New Orleans.

The wind damage done by hurricanes is aggravated in coastal areas by the storm surge swept up by the storm. Often the water does more damage than the wind itself, although hurricanes are normally attended by other dangers as well, including tornadoes set off by the incredible turbulence in the system.

6. Permafrost

The role of temperature in soil development is especially pronounced in areas of extremely cold climate. There the entire depth of the soil freezes solid during the long winter; in summer only, the upper 3 ft (less than 1 m) or less thaws. Since there is solidly frozen ground below this upper layer, water percolating downward from the soil surface cannot go very far and thus the soil tends to be poorly drained, especially in flat-lying areas. Where this situation prevails permafrost exists and soil development is inhibited. Permafrost refers to the permanently frozen ground below the soil that alternately freezes and thaws.

The area subject to permafrost conditions is quite large; permafrost does more than affect soil development, it also poses serious problems in construction. The annual freeze-thaw cycle contracts and expands the soil, so that structures are not adequately supported; the alternative is not simply to drive supports into the permafrost below, because it will not support heavy structures. Many roads and railroads in permafrost country have buckled and broken.

When the Alaska pipeline was built to carry oil from the North Slope to the Pacific coast, it was necessary to raise the pipeline above the ground on pedestals anchored deeply into the permafrost. This prevented the oil from melting the permafrost and distributed the pipeline's weight in such a wavy as to reduce the risk of fracture. About one quarter of the total length of the pipeline is raised above the permafrost zone.

7. Alternative Energy Sources

When shortages in fuel supplies develop, as was the case during the most recent energy crisis, the search for alternative sources of energy intensifies. During the shortage of the 1970s, prototype electric cars made

their appearance. When the shortage disappeared, little more was heard of this technology. Its time may come again.

Some alternative sources of energy have served for a very long time. Hydroelectric power stations as recently as the early 1950s contributed as much as 30 percent of all electricity consumed in the United States, but that share has dropped to a mere 7 percent, reflecting the enormous increase in total consumption over the past 40 years. In other countries, such as Japan and Norway, the role of hydroelectric power is much more important in the overall energy picture.

Solar energy (energy from the sun) is another option. Harnessing that energy in quantities that would really help reduce dependence on fossil fuels is a difficult proposition. It can be done directly through glass panels or reflecting (ray-concentrating) mirrors, but this remains a proposition for individual buildings or homes, not for general use. Energy cells capable of collecting and storing solar energy and converting it to electricity remain too expensive for large-scale application.

Wind power also is a long-used source of energy. The Western European landscape once was dotted with thousands of windmills that raised water, drove textile-making equipment, ground wheat, and performed other functions. Huge modern versions of these old windmills have produced electricity, but not as dependably as had been hoped. Again, wind energy is likely to remain a mainly local, supplementary source.

The earth provides energy in the form of tidal power, which is harnessed experimentally in a few places, and as geothermal heat in areas where ground water is heated by volcanic conditions in the upper crust. Geothermal development has met with some success, but none of the alternative sources promises to significantly reduce our dependence on the fossil fuels.

8. Urban Density

The problems of overpopulation are felt in many rural areas: in the countrysides of Bangladesh and Burundi, Haiti and Sudan. However, the quality of life for tens of millions of people – recent arrivals as well as long-term residents – has deteriorated in the world's large cities as well.

Mexico City is on its way to becoming the largest urbanised area in the world. In a country with a 1985 population of 80 million, this city has more than 19 million inhabitants, half of them under 18 years of age. Every year more than 400,000 immigrants from Mexico's countryside arrive in the city. Add to this the natural increase, and Mexico City will have more than 30 million residents by the end of the twentieth century.

Mexico City sprawls over more than 400 sq miles (1000 sq kms) of mountain-encircled highland. Local wells have run dry, and water must be pumped in across the mountains. There is no way to dispose of the city's waste except to pump it across the mountains as well. Air pollution is so severe that the city, when approached from the air, seems to lie in a lake of grey-brown smog on many days. Perhaps half the entire population lives in makeshift housing, a vast expanse of ramshackle dwellings lacking most of the basic cooking, laundering, and sanitation facilities.

Yet the immigrants arrive, more than a thousand each day, hoping that their lives will be better in one of the city's thousand formal and informal neighbourhoods than they were in the villages left behind. No matter how difficult the new life will be (especially, they know, in the beginning), the arrivals pour their last resources and their highest hopes into the move to the city.

Crowded Mexico City has many urban ills, but there are cities less well off: Lagos in Nigeria (West Africa), with one of the highest urban growth rates in the world but without even a city-wide sewer system; Calcutta, India, with far more homeless people than Mexico City.

Shanghai, China's largest metropolis, also exceeds Mexico City in sheer overcrowding, although its population is smaller (about 16 million in 1985) and its growth rate slower. One out of every 8 inner-city residents of Shanghai is homeless, more than half the people do not have toilet or bathing facilities. Pollution-spewing factories stand side by side with crowded dwellings. Piles of industrial wastes fill empty lots; raw sewage seeps into some streets. Rush hour is a daily nightmare, with three times as many riders as there are seats available on buses and trains. People must spend countless hours standing in line for everything from food to medical attention. Health conditions are dismal, not only as a result of the polluted air, but also from the contaminated water and toxin-affected foods. Medical services are inadequate; there is one fully appointed hospital bed for every 1500 residents.

Yet Shanghai, too, attracts people like a magnet. The city grew by leaps and bounds during the 1950s, doubling its population in just eight years. The government acted to stop immigration in 1960, but during China's political turmoil of the 1960s and 1970s, home building in China virtually stopped for more than five years. As a result, Shanghai has been trying to cope with the aftermath of these inappropriate government actions, which launched the present episode of runaway, explosive growth. The city has been described as one of the most uncomfortable places in the world to live and work – a designation it shares with other mushroomed urban giants.

9. Birds' migration

One of the most mysterious things in nature is the ability of certain creatures to find their way home, sometimes from great distances. Birds are

not the only ones who can do this. Bees, eels, and salmon are able to return to a particular place after long journey, too.

Most migrations take place between breeding grounds and regions where animals feed. For some animals, such as the lemming, the move is a one-way trip. Some scientists call this movement *emigration*, because these animals never return to their homes. For other animals, such as birds, the migration includes a return trip home. Birds move in *periodic migrations*, or at regular times during their lives, and often to the same place year after year.

Many experiments have been made with birds in an attempt to find out what guides them on their way home. In one case, seven swallows were taken 400 miles from home. When they were set free, five of them returned to their nests. In another case, a certain kind of sea bird was taken from its nest off the Welsh coast to Venice by plane. When it was released, it made its way home to its nest, a distance of 930 miles if it flew in a straight line.

Migrating birds offer an even more amazing example of this ability. There are swifts and house martins that migrate from England to South Africa every year. They not only return to England the next spring, but many of them come back to incredible distance of 6,000 miles, one way.

Certain types of butterflies migrate, too, and find their way home over long distances. In the tropics one can sometimes see great mass flights of butterflies all flying steadily in one direction. They may go a thousand miles and more and then return again in another season.

Despite all the efforts that have been made to explain hoe these creatures find their way home, we still have no sure explanation. Since many of the birds fly over great bodies of water, we can't explain it by saying they use landmarks to guide them. Just to say they have an "instinct" doesn't really explain the right conditions. The reason they do it may be to obtain food or to reproduce under the right conditions. But the signals and guideposts they use on their flights are still a mystery to man.

10. The limits of the Earth

There will be more than 7.0 billion people occupying the earth as of 2010. The resources necessary for survival of the Earth's inhabitants, whether produced by nature or by people, are a primary factor in explaining the well-being of these billions of people. Some portions of the earth's surface are less suitable for occupation than others because of climatic or other geographical factors. Basic requirements for food and shelter cause the human population to be clustered in more favourable sites. The concentrations of population are the result of past human decisions about obtaining food, shelter, and other needs. Densely inhabited areas, such as the Ganges River plain of India,

historically were easier to occupy because of the low level of technology required in a warm, humid environment and flat land. By contrast, the Sahara of North Africa has never had more than isolated settlements because of the difficulties posed by a severely restricted supply of water. These simple examples of the role of the physical environment in population distribution mask important causal relationships. The lack of water in the Sahara does not prohibit people from living there, but it does present problems that can only be overcome through application of higher technology or at great cost.

The environment and the resources that confront the human occupants of the earth are a geographical reality, but a reality that also depends on the residents' assessment of the utility of the set of resources provided at a specific site. Most people view the Arctic lands of Canada and Alaska as less desirable locales, but the Eskimo population developed a suitable technology for utilising the Arctic's resources. The Bedouin of the Sahara are able to live in a region that most Europeans and Americans would perceive as unsuitable for human occupation. Such examples of resource use in environmental settings with only sparse population illustrate the extent to which resources are a cultural and technological phenomenon. The resources that the Australian aborigines relied upon included rodents, small animals, wild plants, and a host of other naturally occurring foods. The majority Anglo population of Australia today does not recognise any of them as a basic resource. The contrast in assessment of resources between aboriginal and Anglo populations of Australia illustrates the changing relationship between the physical environment and the human use of the world.

The relationship between the human occupants and the physical environment of the earth is complex and difficult to categorize adequately. For some groups with only simple technology, the environment with its naturally occurring resources is a primary factor in affecting the quality of life enjoyed by the inhabitants. For residents of the wealthy industrialized world, the limits presented by the Earth's physical attributes are more indirect. Residents of North America or Western Europe are largely insulated from the vagaries of day-to-day climatic phenomena, are insulated from hazards of drought or other food-threatening occurrences by efficient social organizations; but ultimately rely upon the earth because of their almost insatiable demand for mineral resources. The industrialized world contains 30 percent of the Earth's population, but it consumes 87 percent of all energy resources each year. Consumption of some mineral resources such as aluminum or copper is almost entirely within the industrialized countries, which consume an average of 95 percent of world production.

The disproportionate share of resources that the industrialized world consumes epitomizes the complex role of the physical environment. Resources that might benefit the residents of a less industrialized country are too often exploited by industrial countries for use beyond the boundaries of the less industrialized region. The overwhelming concentration of resource consumption in industrialized regions suggests that in order to increase the standard of living of residents of less developed areas, residents of developed areas must be willing to curtail their consumption of the earth's finite resources.

11. The English-speaking countries

English is the second most widely spoken language in the world (the first is Chinese) and it is the most popular. It is the official language of the United Kingdom, Ireland (Eire), the United States of America, Canada, Jamaica, South Africa, Australia and New Zealand and it is widely spoken in India. It is the language of international business and science, aviation and shipping, computer science, sport and politics. About one third of the world speaks English.

As so many people speak English in so many different countries, there are many different "Englishes". The best form of English is called Standard English and it the language of educated English speakers. It is used by the Government, the BBC, the Universities and it is often called Queen's English.

12. Canada

The Dominion of Canada, containing four provinces – Quebec, Ontario, Nova Scotia and New Brunswick was established by the British North America Act on July 1, 1867. It combined features of the governments of the United States and Britain. Other provinces joined later.

The National Flag was adopted by Parliament in 1964. It is a red flag containing in the centre a white square with a single red maple leaf. Red and white are the official colours of Canada.

Canada (Indian "kanata" – a village) is a magnificent land. It has an area of nearly 10 million square kilometres and population about 28 million; 23 % of population live in rural areas. Canada has two official languages: English (69 %), and French (24 %), 6 % of Canadians speak Italian, Chinese, German and Portuguese.

Within its borders lies a diversity of life, landscape and climate that few countries can rival. Bordered on three sides by oceans, Canada possesses a variety of terrain, from rainforests to nearly deserts. It is a northern country, but its climate varies dramatically. Winters can be long and cold, summers

often scorching. Ocean currents moderate these extremes – the south-west coast of British Columbia is labelled Canada's "banana belt".

Most Canadians are immigrants or are the descendants of immigrants. In fact, about 97 % of Canada's citizens fir into this category. The first Canadians were Amerindians, who came from Asia.

Canada is a democratic country, it is a constitutional monarchy. The head of state is the Queen of Canada, who is also Queen of Britain, Australia and New Zealand. All her powers are now exercised by her representative, the Governor General. Canada is a federal state with 10 self-governing provinces and two territories controlled by the central government. The written Constitution of Canada is a collection of 24 documents including Acts of the British and Canadian Parliaments.. Parliament consists of the Queen, the Senate and the House of Commons. The Senate can initiate any bills except money bills. The Speaker of the Senate is appointed by the cabinet. The senators are appointed by the Prime Minister. They hold office till age of 75. They must reside in the province for which they are appointed. The House of Commons is the major law-making body. The Prime Minister is appointed by the Governor General.

Canada is one of the world's richest countries. A per capita GNP is $ 11,400. Canadians enjoy one of the world's highest standards of living. Canada's wealth comes from the exploitation of its rich natural resources and from the work of its citizens. Canadians are employed in a tremendous variety of jobs. All of these jobs can be grouped into one of three categories: extractive industries, manufacturing industries, and service industry. Manufacturing and construction employ over 23 % of labour force. Chief industry is petroleum extraction. Canada exports motor vehicles and parts, petroleum and natural gas, food and animals. Canada's chief trading partner is the USA.

The capital of Canada is Ottawa with the population of about 500,000 people.

The largest and most important cities in Canada are Kingston, Toronto – a big port on Lake Ontario with the population of about 2 million people, Montreal – with its famous universities and Vancouver.

13. Australia

Australia is the 6th largest country in the world. Its territory is about 7 million square kilometres. It is only slightly smaller than the USA. Australia is located to the south of Asia, between the Pacific and Indian Oceans. It is the only country that occupies a complete continent. Australia is a federal state. There are 6 states and 2 territories: New South Wales, Queensland, South Australia, Tasmania, Victoria, and Western Australia, Northern territory and

Australian Capital Territory with Canberra, the national capital. Each Australian state has its own government and capital.

Australia is a constitutional monarchy. It is a member of Britain's Commonwealth and officially recognises Queen Elizabeth as its monarch. A governor – general formally represents the Queen.

A long chain of mountains, the great Dividing Range, runs along the Pacific Ocean. It is also the driest continent in the world. About one third of the land is desert. Australia has 4 main deserts. The Great Barrier Reef is a garden under the sea. It has 400 species of corals. Rivers fill with water only during the rainy season.

Australia has many national parks, where wild life is protected.

Large cities are Sydney (population 3,5 mln) and Melbourne (population 3 mln).

The climate ranges from tropical monsoon in the north to temperate in the south. Wet season is January-April. In the centre the climate is very dry.

Australia has a strong economy and is self-sufficient in food production. Australia exports many minerals, including iron ore, bauxite, diamonds, coal, silver, gold, and copper, as well as wheat, meat, cane sugar, etc. The country is the world's leading exporter of wool and beef. It also ranks high in sheep production. The country's manufacturing industry supplies domestic and export demand. Oil and natural gas have helped to build big industries. The main ports are Sydney, Newcastle, Adelaide, and Melbourne.

Inflation is about 3 %. The currency is the Australian dollar. Real domestic product per capita is $ 18,220. Poverty does exist but the poor have the potential to earn a decent income.

New Zealand is an island country, 1000 miles of Australia. It covers 268,680 sq. km. This mountainous island nation lies in the South Pacific about 1,600 km south-east of Australia. The longest river is the Waikato (425 km). NZ has hundreds of waterfalls. The two principal land forms are North Island and South Island. Small islands are uninhabited. The more populous North Island has fertile agricultural land, the largest man-made forest in the Southern Hemisphere, and a few isolated snow-capped volcanoes. It also boasts hot springs, mud pools, and geysers in its thermal region.

The climate is temperate, with plenty of sunshine and adequate rainfall. The capital of New Zealand is Wellington. Its population is 325,000. British settlers founded Wellington in 1840. The capital was moved there from Auckland, the largest city, because of Wellington's central location.

Wellington is also a port and manufacture centre. The port handles foreign trade. Factories assemble automobiles. The city is the home of Victoria University of Wellington.

New Zealand has a modern economy. 5 % of the population is employed in agriculture. The country is the world's largest producer of kiwi fruit. Chief crops are barley, potatoes and wheat. NZ is the largest exporter of wool. Industries include food processing, textiles, machinery, wood and paper products.

Tourism is a vital economic sector. Real gross domestic product per capita is $ 14,990. Unemployment is low but higher among Maori. A free-trade agreement with Australia has boosted trade. Economic growth has averaged 4-8 %. One of NZ's major concerns is finding new overseas markets for its diary and wheat production. The currency is the New Zealand dollar.

New Zealand's population is about 4 million. 80 % are Europeans, 10 % are Maori. English and Maori are both official languages.

New Zealand is a constitutional monarchy. New Zealand is a parliamentary democracy within the Commonwealth. Queen Elizabeth II is represented by a governor general. Until 1840 New Zealand had no legal government. Britain gave New Zealand constitution in 1852. The head of the government is the Prime Minister. Parliament is called the House of Representatives. It has 120 seats. New Zealand is divided into 16 regions, 57 districts and 16 towns. There are four main political parties. The voting age is 18. NZ became the first country to give women the right to vote.

15. Zimbabwe

Zimbabwe is a landlocked country in Southern Africa. It has an area of 390,245 sq. km. Most of the country is a high plateau of 1500 m high. Zimbabwe lies in the tropics but has a pleasant climate because of the high altitude. Zimbabwe's beautiful scenery includes the famous Victoria Falls on the Zambezi River. The main rivers are the Zambezi, Limpopo and Sabi. Climate of the country is hot and wet. Winters are cool and dry. Temperatures range between +12°C and +29°C.

Harare is the capital and financial centre of Zimbabwe. Harare is one of the most beautiful and developed cities in Africa. New buildings are changing the skyline of the city. It is surrounded by the richest farmland in the country. It has also an industrial area.

An executive president heads Zimbabwe's government, and appoints a Cabinet. Laws are made by a parliament that consists of 150-member House of Assembly.

Population of Zimbabwe is about 8 million. 98 % of Zimbabwians are black. 1 % are whites.

Zimbabwe is a producer of gold, asbestos and nickel. The country has deposits of chromite, copper, tin, and gems. crops include coffee, corn, cotton,

peanuts, sugar, sunflower seeds, tea, tobacco, and wheat. Cattle raising on large ranches is also important. The private sector dominates the main stream of economic activities.

Zimbabwe (former Rhodesia) was the first colony to break with Britain without consent. In 1980 Britain recognised the country's independence. Rhodesia's name was officially changed to Zimbabwe. It became the member of the UN. In 1990 Mugabe was re-elected executive president of Zimbabwe.

1. Read and complete the following paragraph:

The British Commonwealth of Nations

The British Commonwealth of Nations …… a free association of independent nations and …… dependencies. It developed …… New Zealand and South Africa …… given the status of self-governing dominions and later became completely independent …… British rule. During the 20th century almost all British colonies chose …… to break all connections with the colonial past or remain within the Commonwealth …… independent nations. Most chose to stay for various reasons, mainly economic …… Nowadays there …… Canada, New Zealand, India, Sri Lanka, Kenya, Singapore, Pakistan and Zimbabwe. The Commonwealth is …… unique organisation, and …… nearly a quarter of the world's population. It maintains …… it is …… only world-wide nationalities, who are united …… a common bond.

2. Reply to the following sentences with a suitable question.

a. Canada is the United States' neighbour to the north.

b. Every four years, Americans participate in the election of the nation's President.

c. The President is assisted by his Vice-President and his Cabinet.

d. The summer before the election both political parties hold a convention, a huge meeting. where the policy of the party is chosen.

e. In early times the New York area was populated by Indians.

3. Name 5 rights under a democracy and explain what you think each mean.

Right of …… means that ……
Right of …… means that ……
Right of …… means that ……
Right of …… means that ……
Right of …… means that ……

16. The United Kingdom of Great Britain

The United Kingdom of Great Britain and Northern Ireland is located off north-western coast of Europe between the Atlantic Ocean and the North

Sea. It is separated from the continent by the Strait of Dover and the English Channel, 34 km wide.

Its total area of 244,035 sq. km is shared by four constituent units: England, Wales, and Scotland, forming Great Britain and Northern Ireland on the island of Ireland separated from Great Britain by the North Channel.

There are also several island groups, of which the best known are the Orkney Islands, the Shetland Islands, the Outer Hebrides, the Isle of Man and the Channel Islands.

No place in Britain is more than 120 km from tidal water. The seas surrounding the British Isles are shallow, usually less than 90 meters because the islands lie on the continental shelf.

The population of the United Kingdom is about 60 mln people, about 80 % of it is urban.

The surface of the British Isles varies very much. The north of Scotland is mountainous and is called the Highlands. The South which has beautiful valleys and plains is called the Lowlands. There are a lot of rivers in great Britain but they are not very long. The Severn is the longest river while the Thames is the deepest and the most important one. The mountains, the Atlantic Ocean and the warm waters of the Gulf Stream make the climate of the UK mild the whole year round.

The United Kingdom is a highly developed industrial country where the earliest developments of modern industry took place. The original basis of British industry was coal-mining. Nowadays it produces and exports machinery, electronics, textile goods. One of the chief industries of the country is shipbuilding.

The UK is a constitutional monarchy with a Parliament and the Queen as head of the State. The legislative power in the country is exercised by the Houses of Parliament has met at Westminster since the 13th century. To debate the nation's affairs, pass legislation and vote money supply to the government of the day. The British Parliament consists of two chambers: the House of Lords and the House of Commons. The members of the House of Commons are elected by the people. They are elected from the constituencies in England, Scotland, Wales and Northern Ireland. The House of Commons is the real governing body of the United Kingdom. However, changes and modernisation of the state system are under way at present.

The executive power is exercised by the Prime Minister and his Cabinet. The Government is formed by the political party which is supported by the majority in the House of Commons. The Prime Minister is the leader of the majority party and is appointed by the Queen. The Prime Minister chooses a team of ministers; twenty of the ministers are in the Cabinet.

The boot of the bronze statue of Sir Winston Churchill, which stands in the members' lobby, is highly polished by the constant stream of MPs touching it for luck before making a speech in the Chamber.

The second largest party becomes the official opposition with its own leader and the Shadow Cabinet. The two leading parties in Great Britain are the Conservative (the Tories) and the Labour Party.

There is no written constitution in Great Britain, only precedents and traditions.

Britain's largest cities are: London, Birmingham, Leeds, Glasgow, Sheffield, Edinburgh.

London is the capital of the United Kingdom. Covering 1,580 sq. km it is the largest conurbation in Europe. Nearly seven million people live in London and a further million travel in each day to work. Their city is both the capital of Britain and a major economic centre. London's economy benefits from its favourable location as a sheltered port facing across the North Sea to mainland Europe. Excellent communications give access to markets both inland and abroad. As a great trading city London has long drawn people from across the world to live and work there. The resulting cosmopolitan mix contributes to the diversity of London's arts, culture and entertainment and the vitality of London life.

London is situated on the banks of the river Thames which divides it into two parts – the West End and the East End. The other two important sections are the City and Westminster.

The City is the financial and business centre of the country. One of the great English churches – St. Paul's Cathedral is here.

Adjoining Parliament Square is a road called Whitehall. This is the traditional heart of the British state, and the word "Whitehall" is widely used to describe either the government or the civil service. Both sides of its wide route are lined with the offices of several of the great departments of state through which the business of government is carried out, as well as the London offices of the Scottish and Welsh offices.

There are many famous historical places in London, such as the Tower of London, Westminster Abbey, Trafalgar Square, St. Paul's Cathedral, Buckingham Palace and others.

Birmingham is Britain's second largest city and its engineering centre. It produces iron and steel for making cars, ships, aeroplanes and machinery. Leeds, the third largest city in the United Kingdom, produces woollen goods. Sheffield is a centre of steel goods production. Glasgow is famous for heavy industry. Besides, it is an important cultural centre. It is noted for its architecture and art galleries. Edinburgh is the city of science. It is associated with science, beautiful historic buildings and the annual festival of arts. Edinburgh is called "Athens of the North".

II. Translate into English:

У світі цікавого

1. "Сюрпризи Амазонії"

Там така жара, що сорочка відразу ж прилипає до мокрого від поту тіла… Там несе свої води найбільша ріка у світі… Це – Амазонія – величезна країна, повна життя, барвів і небезпек.

У пекельній жарі Амазонії (+42°С у тіні, волога – 98 %, і ніде ні найменшої прохолоди) живуть понад 8600 видів птахів і понад 1500 видів різних риб.

Із всіх риб, які живуть в Амазонці та її притоках, найзнаменитіші, звичайно, піраньї. Невеликі хижі рибки довжиною 15-30 сантиметрів, з гострими, як лезо бритви, зубами наганяють страх на жителів прибережних сіл. Однак піраньї не тільки небезпечні, але й смачні, ось чому для місцевих жителів це найулюбленіший делікатес. Небезпеку від цих риб сильно перебільшують. Піраньї нападають, тільки коли почують у воді кров, а в інших випадках поводять себе не гірше окунів. Крім цього, піраньї живуть у замуленій воді тихих заток. Кому ж заманеться прати чи купатися в смердячому болоті?

А ось справжню небезпеку для мандрівників у джунглях Амазонії становлять мурахи. Якщо шукачі пригод раптом помітять на березі маленькі червоні крапки, то повинні негайно тікати, тому що від мурахів теока, так, як і від мурахів, яких індійці називають "вогняна смерть", іншого порятунку немає. Вони хмарою накидаються на жертву, і тоді починається бенкет хижаків. Так що якщо кому-небудь з вас заманеться провести відпустку в Амазонії, рекомендуємо вам все продумати, поки ще не пізно…

2. Дивовижний світ печер

У заповіднику Гулунг-Мулу, який розташований у Малайзії, є Біла гора, всередині якої знаходяться печери. Печери вперше знайшли британські спелеологи в 1984 році. Вони вражають не тільки своїми колосальними розмірами, але і виключним багатством тварин – їхніх мешканців.

У глибині Білої гори зручні тунелі й зали раптово обриваються бездонними проваллями, в інших місцях шлях перегороджують обривисті скали. В деяких печерах з височенних склепінь звисають сталактити, в інших виростають з-під землі сталагмити, створюючи цілі зали якоїсь фантастичної неземної архітектури.

У цій лякаючій неживій красі живе багато тварин. У повній темряві живі істоти розвиваються, звичайно, зовсім по-іншому, ніж на поверхні, але вони прекрасно пристосувались до незвичайних умов життя. Крім законних мешканців печер – кажанів, тут можна зустріти деякі види черепах, риб, саламандр, змій, ящірок, не кажучи вже про хмари комах, безхребетних організмів і рослин.

Але людині довго перебувати в Білій горі не можна. Інакше вона захворіє на "ногу Мулу" – ноги вкривають червоні прищі, вони розпухають і сильно болять.

Такий дивовижний світ печер острова Борнео.

3. Остання крапля

Вторгнення на Американський континент іспанських конкістадорів, голод, міжусобні війни і, як результат, занепад культури майя навряд чи можна пояснити однією причиною. Недавні дослідження показали, що останній удар індійцям майя завдали кліматичні умови – три довготривалі посушливі періоди.

Учені провели аналіз відлогів у бухті Каріако біля берегів Венесуели і дійшли таких висновків: в IX столітті н. е. в регіоні Центральної Америки повторювалися катастрофічні посухи. Особливо довготривалими були посушливі періоди в 810, 860 і 910 роках. Імовірно, в цей час був порушений весь колообіг води в тропічній Південній Америці.

Протягом століття випадало дуже мало дощів. Індійці майя користувались хитромудрою системою каналів для бережного витрачання водяних ресурсів і поповнення запасів води – ось чому цей народ спокійно переживав посушливі роки. А ось проти столітньої посухи їхня зрошувальна система не допомогла. Посуха, неврожаї, голод ще більше посилили всі інші труднощі й нещастя. Принаймні, три посушливі періоди раз і назавжди "добили" імперію майя, яку роздирали багато внутрішніх протиріч і яка була не в змозі протистояти іноземним завойовникам.

Part 3

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1. Damage to Oceans Is out of Control, Says UN

Damage to once pristine habitats of the deep oceans by pollution, litter and overfishing is running out of control, the United Nations warned. In a report that indicates that time is running out to save them, the UN said humankind‘s exploitation of the deep seas and oceans was “rapidly passing the point of no return”.

Last year some 85m tonnes of wild fish were pulled from the global oceans, 100 million sharks and related species were butchered for their fins, some 250,000 turtles became tangled in fishing gear, and 300,000 seabirds, including 100,000 albatrosses, were killed by illegal longline fishing.

Into the water in their place went 3 bn individual pieces of litter – about 8 m a day – joining the 46,000 pieces of discarded plastic that currently float on every square mile of ocean and kill another million seabirds each year. The water temperature rose and its alkalinity fell – both the result of climate change.

Coral barriers off Australia and Belize are dying and newly discovered reefs in the Atlantic have already been destroyed by bottom trawling.

“Humankind’s ability to exploit the deep oceans and high seas has accelerated rapidly over recent years. It is a pace of change that has outstripped our institutions and conservation efforts”.

Mining, for example, could soon spread to the sea floor for the first time. The Canadian company Nautilius Minerals plans to dig for deposits of gold and copper off Papua New Guinea.

More than 90 % of the world’s living organisms are found in the oceans, but a new UN report says that researchers are only now beginning to understand the nature of their ecosystems”. Today these environments are considered to have been the very cradle for life on Earth”.

2. Closer to the Melting Point

Half of Greenland and vast areas of Antarctica are destined to melt if global warming continues at the same pace until the end of the century, scientists warned. Their research shows that the loss of so much ice will trigger dramatic rises in sea levels, ultimately swamping low-lying regions of England – Essex, Lincolnshire and Norfolk – and threatening the flood defences of cities such as London, Liverpool and Bristol. The last time so much ice was lost from the poles – in a period between ice ages 129,000 years ago – global sea levels rose by four to six metres.

Experts believe many coastal regions would suffer long before sea levels rose significantly, because even a minor rise will make storm surges more devastating and increase the risk of flooding. A rise of one metre would in effect close the port of London as the Thames barrier would need to be raised for 300 days a year to protect the city, according to one scientist.

The warning comes from climate scientists who combined historical records of Arctic and Antarctic ice melting with advanced computer models capable of predicting future environmental conditions. They found that if nothing is done to put the brakes on climate change, Greenland, the west Antarctic ice sheet and other expanses of polar ice will be warmed beyond a "tipping point" after which their melting is inevitable.

If temperatures do rise as the scientists predict, the ice at the poles will not be lost immediately. Enough ice is likely to melt witnin the next 100 years to raise sea levels by a metre, but ultimately the fresh water pouring into the North Atlantic would slow down the Gulf stream, which bathes Britain in warm water from the tropics, by a quarter.

The major concern is that unless climate change slows down significantly, the eventual loss of polar ice and subsequent six-metre rise in sea levels will be unavoidable.

The melting 129,000 years ago was driven by natural processes. This time greenhouse gas emissions have been warming the planet since the industrial age. Carbon dioxide levels in the atmosphere stand at around 380 parts per million, but many scientists believe they will rise to 550 ppm by the middle of the century.

3. Drought Threatens Amazon Basin for Second Year Running

Amazon Indians and church leaders have blessed the vast expanse of the Amazon in a ceremony just where the silty river mingles with the coffee-coloured Rio Negro. They asked the river to protect them from drought.

The prospect of dryness seems incredible in Manaus, a Brazilian port city where both the Amazon and Rio Negro are more than 8 km wide and 300 m deep. At more than 1,600 km from the sea, the two waterways can be navigated by ocean-going ships and dwarf every other river in the world in volume. But last year the worst drought in more than a century hit the Amazon basin, drying up tributaries 1.5 km wide and prompting Brazil to declare a state of emergency across the entire region.

Tens of thousands were cut off as rivers that are the main means of transportation became mudflats and grasslands, leaving boats stranded among millions of rotting fish.

Locals hoped that the drought was a once-in-a-generation event, but there are signs that the extreme conditions are returning. In the Acre region close to Brazil's borders with Bolivia and Peru, where last year's drought began, sandbanks have started to appear in rivers that are normally larger than any European counterparts.

Such conditions usually occur only at the end of the dry season in September, but this year Acre unprecedentedly went without rain for 40 days in June and early July. The government's technical foundation in Acre said vegetation was so dry that there was a serious danger of forest fires.

The blessing of the rivers came at the start of a conference examining the deterioration of the Amazon basin. It brings together religious leaders, politicians and scientists aboard a fleet of boats anchored in Manaus, the Amazon's main city.

Brazil's environment minister said that the drought was linked to record sea temperatures in the south-west Atlantic and Gulf of Mexico that contributed to last year's record hurricane season. But the destruction of the rainforest by illegal loggers has also been blamed as a cause, as rivers become choked with silt swept from the denuded land.

4. Climate Studies Can Predict Malaria Epidemics

Scientists have developed an early-warning system for the outbreak of malaria epidemics. They claim that the system, which is based on computer models of climate change, can predict outbreaks up to five months in advance.

Malaria kills more than 1 million people every year, and infects 500 million worldwide. Although endemic in many parts of the world, the disease is concentrated in sub-Saharan Africa, which accounts for almost 90 % of all cases. "Although the greatest burden of malaria in Africa is suffered by those living in endemic regions, epidemics pose a serious threat to many millions of people and their prevention remains a priority", wrote the researchers in their paper, published in Nature.

Climate is key in the development of not only the malaria parasite but also the mosquitoes that carry it. In Botswana the national malaria control programme has developed an early-warning system based on population vulnerability, rainfall, and health surveillance to predict and detect unusual changes in the seasonal pattern of disease. The risk of an epidemic in Botswana increases dramatically just after a season of good rainfall.

A separate study published last year showed that monitoring rainfall and sea surface temperature could predict the peak of a malaria season up to

a month in advance. But the earlier warning could give health workers more time to build up drug stocks or to target insecticides. Preventive and protective measures – spraying stagnant waters, providing anti-malarial drugs, bed nets, etc – can be targeted on the regions most at risk, thus making better use of existing resources.

5. Oslo Beats Tokyo as World's Costliest City

For 14 years Tokyo was ranked as the most expensive city in the world for visitors, but Japan's capital has been robbed of its dubious title by Europe's relative economic resurgence. Oslo, the ancient Viking port at the heart of Norway's oil-fuelled boom, is now the costliest place on the planet to do business or stay as a tourist.

Eight of the priciest 10 locations are European, including London in seventh place. America has slipped significantly, according to the detailed cost of living survey conducted by the Economist Intelligence Unit. New York is the most expensive US city – in 27th position.

Whether being most expensive adds prestige or deters cost-conscious travellers, the rankings reflect shifting global patterns of prosperity. The topping of Tokyo marks the end of an era. Since 1991 a Japanese city has held the top spot; at one stage the biannual survey placed Tokyo and Osaka joint first. Before Tokyo's ascendancy, Tehran was deemed to be the city that emptied visitors' pockets fastest due to an overvalued official exchange rate. Currency revaluations have helped Tehran become one of the cheapest places to stay: it is now in 128th position – at the foot of the table.

Tokyo still occupies second place, but its decline comes as the Japanese economy continues to fight the effects of a weakening yen compounded by years of low inflation and deflation.

Norway, always thought of as relatively expensive thanks to high taxes to support a generous social system, has had its economy boosted by cash from offshore oilfields. It has enjoyed "high consumer confidence, rampant investment and still-low interest rates", the survey comments.

Other fast European risers include Iceland's capital, Reykjavik, which jumped to third place ahead of Osaka, Paris, Copenhagen, London, Zurich, Geneva and Helsinki occupied the next six places.

6. Clean Water is a Human Right

Latin America's largest metropolis, with more than 20 million people, is sinking. Mexico City is built on an ancient lake that has been drained, and now the underground aquifers are collapsing. But that is only half the

problem. In what is developing into one of the world's most pressing environment problem, rivers of sewage flow through many poor neighbourhoods, the city loses 40-50 % of all its water in leaks, and 100 cubic metres of hard-to-dispose waste is generated every second.

Yet every day more than 1,000 people come to live in Mexico City, and the local authorities are overwhelmed. Last year a million people depended on water trucks, or "pipas", to meet their basic need for water. The rich bought it bottled, the poorest paid by the bucketful, and there were clashes between neighbours as people stole water from each other. Even though more than 800 km of new pipes have been laid in the past few years, 40 % of people still refuse to pay or do not receive bills. The whole system urgently needs several billion dollars' investment.

Moreover, the problems are worsening. The United Nations has declared that water quality is declining in most regions, that there is an increasing demand for water to grow crops for burgeoning populations, and that urban areas are exploding. By 2030 some 2 billion people will live in illegal squatter settlements and slums without access to water. But what may shock people most is that after almost 15 years of promises by world bodies, national governments, water companies and others, the world's poorest are still not getting the most basic human need.

There is now no chance that the millennium development goal of halving the proportion of people without access to clean water by 2015 will be met. At this rate of progress, says the World Water Council, "access to clean water cannot be guaranteed until beyond 2050 in Latin America and the Caribbean". Blame for the failure will be put on large institutions, states and international companies that have the money, or access to it, but that have failed to target the poor.

Додаток 1

Таблиця хімічних елементів,
які використовуються в науковій літературі

Ar	argon	Аргон
Ac	actinium	Актиній
Ag	silver	Аргентум (срібло)
Al	aluminium	Алюміній
An	actinon	Актиній
As	arsenic	Арсен (миш'як)
At	astatine	Астат (астатин)
Au	gold	Аурум (золото)
B	boron	Бор
Ba	barium	Барій
Be	beryllium	Берилій
Bi	bismuth	Бісмут
Bk	berkelium	Берклій
Br	bromine	Бром
C	carbon	Карбон (вуглець)
Ca	calcium	Кальцій
Cd	cadmium	Кадмій
Cl	chlorine	Хлор
Cm	curium	Кюрій
Co	cobalt	Кобальт
Cr	chromium	Хром
Cu	copper	Купрум (мідь)
F	fluorine	Фтор
Fe	iron	Ферум (залізо)
H	hydrogen	Гідроген (водень)
He	helium	Гелій
Hg	mercury	Меркурій (ртуть)
I	iodine	Йод
In	indium	Індій
K	potassium	Калій
Li	lithium	Літій
Mg	magnesium	Магній
Mn	manganese	Манган (марганець)
N	nitrogen	Нітроген (азот)
Na	sodium	Натрій
Ni	nickel	Нікель
O	oxygen	Оксиген (кисень)
P	phosphorus	Фосфор
Pb	lead	Плюмбум (свинець)
Pt	platinum	Платина
Pu	plutonium	Плутоній
S	sulphur	Сульфур (сірка)
Sb	antimony	Стибій (сурма)
Si	silicon	Силіцій (кремній)
Sn	tin	Олово
Sr	strontium	Стронцій
Ta	tantalum	Тантал

Ti	titanium	Титан
U	uranium	Уран
V	vanadium	Ванадій
Wn	tungsten	Вольфрам
Zn	zinc	Цинк

Додаток 2

Математичні символи
Numerals – Числівники

One	first	один	перший
Two	second	два	другий
Three	third	три	третій
Four	fourth	чотири	четвертий
Five	fifth	п’ять	п’ятий
Six	sixth	шість	шостий
Seven	seventh	сім	сьомий
Eight	eighth	вісім	восьмий
Nine	ninth	дев’ять	дев’ятий
Ten	tenth	десять	десятий
Eleven	eleventh	одинадцять	одинадцятий
Twelve	twelfth	дванадцять	дванадцятий
Thirteen	thirteenth	тринадцять	тринадцятий
Fourteen	fourteenth	чотирнадцять	чотирнадцятий
Fifteen	fifteenth	п’ятнадцять	п’ятнадцятий
Sixteen	sixteenth	шістнадцять	шістнадцятий
Seventeen	seventeenth	сімнадцять	сімнадцятий
Eighteen	eighteenth	вісімнадцять	вісімнадцятий
Nineteen	nineteenth	дев’ятнадцять	дев’ятнадцятий
Twenty	twentieth	двадцять	двадцятий
Twenty one	twenty first	двадцять один	двадцять перший
Twenty two	twenty second	двадцять два	двадцять другий
Thirty	thirtieth	тридцять	тридцятий
Forty	fortieth	сорок	сороковий
Fifty	fiftieth	п'ятдесят	п’ятидесятий
Sixty	sixtieth	шістдесят	шістдесятий
Seventy	seventieth	сімдесят	сімдесятий
Eighty	eightieth	вісімдесят	восьмидесятий
Ninety	ninetieth	дев’яносто	дев’яностий
One hundred		сто	
Six hundred		шістсот	
One thousand		тисяча	
Six thousand		шість тисяч	
One million		мільйон	

Six million	шість мільйонів
One milliard (billion–am.)	мільярд
Six milliard	шість мільярдів

Порядок читання цифрових сполучень

3 – three
13 – thirteen
30 – thirty
33 – thirty three
333 – three hundred and thirty three
333,333 – three hundred and thirty three thousand, three hundred and thirty three
333,333,333 – three hundred and thirty three million, three hundred and thirty three thousand, three hundred and thirty three
123,456,789 – 1h and 23m 4h and 56th. 7h and 89 – one hundred and twenty three million four hundred and fifty six thousand seven hundred and eighty nine.
1 % one percent – один процент
20 % twenty percent – двадцять процентів

Fractional Numerals – Дробові числівники
Common Fractions – Звичайні дроби

½ a half; one half
1/3 a third; one third
1/10 a tenth; one tenth
1/25 a (one) twenty fifth
¼ 1) a quarter; one quarter
2) a fourth; one fourth
1/5 a fifth; one fifth
¾ 1) three fourths
2) three quarters
5/16 five sixteenths
9/10 nine-tenths
26/38 twenty six thirty-eighths
79/100 seventy-nine hundredths
1/100 a (one) hundredth
1/1000 a (one) thousandth
125/1000 a (one) hundred and twenty-five thousandths
2 ½ two and a half
3 1/3 three and a third
135 ¾ a (one) hundred and thirty-five and three fourths (three quarters)

Decimal Fractions – Десяткові дроби

0.2 1) 0 point two
2) nought point two
3) zero point two

4) point two
0.02 1) o point o two
2) nought point nought two
3) zero point zero two
4) point nought two
5) point zero two
0.002 1) o point o two
2) nought point nought nought two
3) zero point zero zero two
4) point nought nought two
5) point two one two
0.75 1) nought point seventy-five
2) point seven five
one point one
one point two five
63.57 1) sixty-three point five seven
2) six three point five seven
12.707 1) twelve point seven nought seven
2) one two point seven nought seven
***
2x3=6 – twice three is (makes) six
3x4=12 – three times four are twelve
7+8=15 – seven and (plus) eight are (make) fifteen
10-3=7 – ten less (minus) three is seven
20:5=4 – twenty divided by five is (makes) four

Додаток 3

Стійкі англо-українські словосполучення наукової мови

A

above:	
above all	перш за все, передусім, насамперед
accord:	
in accord with	згідно з
accordingly	
account:	
of no account	незначний
on account of	у результаті, унаслідок
on no account	ні в якому разі, у жодному разі
on one's account	самостійно
on this account	ось чому
to leave (put) out of account	не брати до уваги
to take account of	враховувати
to take into account	враховувати

after:	
after all	урешті-решт
after a while	через деякий час
after the fashion	методом
well after	значно пізніше
all:	
all along	весь час
all in all	узагалі
all but	усі крім
all over	усюди, навкруги
all the more	тим більше, тим паче
all through	протягом
first of all	перш за все, насамперед
along:	
all along	весь час
along with	разом
alongside	разом з тим
altogether	у цілому, загалом
and:	
and so on	і так далі, тощо
any:	
in any (anything)	якщо взагалі
anyhow	так чи інакше
anyway	узагалі
as:	
as…as	такий як
as against	порівняно з
as distinct from	на відміну від
as far as…is concerned	відносно
as far back as	ще
as for	відносно
as good as	фактично
as if, as though	нібито
as it is, as it does	фактично
as often as not	нерідко, часто
as soon as	як тільки, щойно
as well as	а також
as yet	ще
at:	
at all	узагалі
at all events	у кожному разі
at any rate	у кожному разі
at best	у найкращому разі
at large	детально
at most	найбільше
at once	відразу
at a time	за один раз

at times	деколи

B

behalf:	
in behalf	заради
on behalf	за дорученням
best:	
at best	у найкращому разі
best value	оптимальна величина
to the best of our knowledge	наскільки нам відомо
to do one's best	робити все можливе
both:	
both…and…	як… так…
by:	
by and large	узагалі
by degree	поступово
by then	значно
by virtue of	дякуючи, завдяки
by way	з допомогою
for and by	узагалі кажучи

C

case:	
the case is	річ у тім, що
as the case may be	за обставинами
in case	на випадкок, коли…
in any case	у кожному разі
in no case	ні в якому разі, в жодному разі
this is far from being the case	справа зовсім не в цьому
certain:	
for certain	упевнено
to make certain	упевнитись
come:	
to come into being	виникати
to come into force	набувати чинності
comparison:	
in comparison with	порівняно з
beyond comparison	понад усяке порівняння
conclusion:	
to bring to a conclusion	закінчувати
to arrive at a conclusion	зробити висновки
to reach a conclusion	дійти висновку

consequence:	
as a consequence	у результаті, унаслідок
consideration:	
on no consideration	неістотний, незначний
to take into consideration	взяти до уваги
contrary:	
contrary to	на противагу
contrast:	
by contrast to (with)	порівняно з
course:	
in due course	коли треба
during the course of	протягом

D

due:	
due to	як результат
to be due to	бути обумовленим

E

end:	
at the end of	у кінці чогось
in the end	урешті-решт
to this end in view	маючи на увазі
with this end in view	маючи на увазі
event:	
at all events	у кожному разі
in any event	урешті-решт
ever:	
ever since	з тих пір
ever so if ever	якщо це взагалі (сталося)
hardly ever	рідко
extent:	
to the extent of	до, в межах
to a certain extent	певною мірою
to such an extent	настільки

F

fact:	
the fact is	справа в тому, що
in fact	насправді
far:	
far and away	без сумніву
far reaching	багатонадійний
as far as it goes	відносно
by far	значно
so far	до цього часу
this is far from	це зовсім не так

for:	
for a while	на деякий час
for good	назавжди
for lack of	через відсутність
for one thing	по-перше
for the first time	уперше
for the sake	заради
for the time being	поки що
for want of	за відсутності

G

general:	
in general	узагалі, звичайно
generally:	
generally speaking	узагалі кажучи
give:	
to give credit for	віддати належне
given that	за умов

H

hence	отже
henceforth	на майбутнє, із цього часу
hereafter	потім
hereat	далі
herein	таким чином
hereinafter	у цьому, до цього
hereof	далі
hereon	відносно цього
hereout	на цій основі
hereto	до цього, попередній
heretofore	попередній
hereunder	до цього часу
hereunto	під цим
hereupon	до цього часу
herewith	вслід за цим
howsoever	нібито

I

if any	якщо взагалі
if ever	з погляду на

in as much	висновок
to draw an inference	робити висновки
in so much	настільки, що

K

keep:	
to keep in mind	враховувати
to keep in touch	підтримувати зв’язок
to keep pace with	не відставати
to keep with	відповідно до

L

lack	відсутність
for lack of	за відсутності
not in the least	зовсім
to say the least	найменшою мірою
length:	
at length	принаймні
lest	щоб… не
let alone	не кажучи про
long:	
long before	задовго до
as long as	поки, відносно
in the long run	урешті-решт
long-term	довгостроковий

M

matter:	
a matter of dispute	предмет суперечок
form and matter	форма та зміст
as a matter of fact	фактично
as a matter of record	на основі отриманих даних
no matter how	немає значення, як
it does not matter	це не має значення
means:	
by any means	неодмінно
by means of	з допомогою
by no means	ні в якому разі, в жодному разі
by some means or other	так чи інакше
more:	
more often than not	нерідко
more than once	неодноразово
the more so	тим більше, що
much more likely	вірогідно
it is more than enough	більш ніж потрібно

once more	ще раз
more or less	більш-менш
all the more so, as	тим більше, ніж
moreover	крім того
much:	
much of	значно
as much as	стільки ж
much the same	майже так
in as much as	тому що
so much for	це все, що стосується

N

no longer	більше не
no matter	неважливо
notwithstanding	незважаючи на
now and again	тепер
now and then	час від часу
from now on	у подальшому
up to now	до цього часу

O

once again	ще раз
onwards	уперед
onwards or else	або
order:	
in order to	для того щоб
over and above	крім того
over and over	багато разів, повторно
well over	значно вище (більше)

P

par	рівність
on a par with	поряд з
par excellence	переважно
part:	
part and parcel	невід'ємна частина
per	в, на, за
per sem	сам по собі
point:	
the point is	справа в тім, що

at all points	відносно всього
in point	той, що розглядають
in point of	відносно
in point of fact	насправді
off the point	не по суті
to the point	по суті
prima facie	на перший погляд
pro et contra	за і проти
pro forma	проформа, для виду
pro rata	пропорційно

R

rather:	
rather than	замість того, не раніше ніж
reason:	
by reason of	услід
for reason given	на основі цього
regard:	
as regards	відносно
with due regard for	враховуючи
resort:	
in the last resort	як останній засіб
respect:	
in respect of	відносно
with respect to	відносно
in no respect	ні в якому разі, в жодному разі

S

sake:	
for the sake of	заради
same:	
the same as	таким же чином
just the same	такий самий
set:	
set forth	викласти
set forward	висунути
set to	починати
so:	
and so forth	наскільки
and so on	і так далі

T

take:	
to take into account	враховувати
to take for granted	скористатись
thereafter	з того часу
thereabouts	поблизу

thereby	тим самим
thereagainst	на противагу
thereanent	відносно
thereat	там, в той час
therefore	тому що
thereupon	за тим
therein	там
thereof	із цього
thereover	відносно
therethrough	таким чином
thereto	крім того
theretofore	до того, до цього часу
thereunder	нижче
therewith	разом з тим
through:	
through and through	досконально
time:	
time and again	часто
from time to time	час від часу
this time	на цей раз

V

via	через
in view of	з погляду на

W

way:	
in one way or another	так чи інакше
in this way	таким чином
the other way round	навпаки
whatever	будь-який
whenever	усякий раз, коли
whereas	тоді як
wherefore	чому, з якої причини
wherein	у чому
whereupon	після чого, тоді

Part 4

Glossary

A	
acid	кислота
accurately	точно
aestivate	впасти в сплячку
alter	змінювати
altitude	висота
alpine	альпійський
ancient	давній
amber	бурштин
angle	кут
annual	щорічний
ant	мурахи
arid	посушливий
artificial	штучний
ash	попіл
axis	вісь
awesome	благоговійний
B	
bare	голий
bark	кора (дерева)
baked soil	земля, що запеклась
beads	намисто
bed	дно
beetle	жук
beneath	знизу
berry	ягода
bind *v*	зв’язувати
bladder	міхур
blueberries	чорниці
bog	болото
boulder	валун
boundary	кордон, межа
briar	вереск, колючий кущ
bulge	випуклість
burrow	нора
C	
camel	верблюд
cast a shade	кинути тінь
catfish	сом
cargo	вантаж

contain	містити
cause	причина, викликати
centipede	сороконіжка
clams	молюски
clay	глина
cliff	круте урвище
clue	ключ
coat *v*	покривати шаром
cone	конус
collide	зіштовхуватись
coastline	берегова лінія
crack	тріщина
cranberries	журавлина
cretaceous	крейдяний
creature	істота
collect	збирати
cool	прохолодний
cornfield	поле, нива
cope with	впоратися з
crest	вершина
crevice	тріщина
curve	крива лінія
current	течія

D

dam	дамба
dampness	вологість
debris	уламки
demolish	руйнувати
deposit *v*	відкладати
dip	пірнати
dike	дайка
dissolve	розчиняти
distinguish	відрізняти
drainage ditch	дренажна канава
drought	посуха
drift	дрейф
dome	купол
dormant	сплячий
dump	купа

E

eel	вугор
embankment	набережна
estuary	дельта

evidence	свідоцтво
eventually	урешті-решт
evergreen	вічнозелений
exist	існувати
explosion	вибух
eject	викидати
erode	викликати ерозію
extinct	вимерлий

F

face	стикатись
fan	вентилятор
faults	розлом
fierce storm	сильний шторм
fine silt	дрібний намул
flat	рівний
flesh	м’ясо
float	плавати на поверхні
fodder	фураж
folds	западина
force of gravity	сила тяжіння
fossils	скам’янілість
footprint	відбиток
flood	повінь
flourish	розквітати
frost	мороз
fell	рубати
fertile	родючий

G

garnet	гранат
gerbit	піщанка
gibber	валун
gneiss	гнейс
grain	зерно
grind	молоти
grouse	ґрунтозачіп
go around	обертатись
gorge	вузька ущелина
gemstone	напівкоштовний камінь

glacier	льодовик
glamorous	чарівний
gyre	кільце
H	
hare	заєць
harsh	суворий
herb	трава (лікарська)
herd	стадо
heron	чапля
heap	купа, відвал
headland	мис
heath	вереск
heather	вереск
hump	горб
hurtle out	голосно стукати, зіштовхнутися
hollow *n*	порожнина
holly	падуб
honeysuckle	жимолость
I	
income	прибуток
inner	внутрішній
insect	комаха
ivy	плющ
J	
jagged	нерівний, зубчатий
join	з'єднувати
L	
landscape	ландшафт
larvae	личинка
last *v*	тривати
load	вантаж
leave behind	відставати
lined with	вистилати
lightning	блискавка
liquid	рідина
lizard	ящірка
layer	шар
lump	великий кусок
lush	буйний, пишний

M

man-made	штучний
mammals	ссавці
match up	відповідати
marsupials	сумчасті
marsh	болото
marine	морський
meadow	луг
meander	звиватися
merge	зливатися
mica	слюда
mighty	сильний
moist	вологий
molten	розтоплений
monsoon	мусон
moor	торфовище
moraine	морена
mouth	гирло
mountain range	гірський кряж
mud	мул
mussels	мідії

N

native	місцевий
neighbouring	сусідній
nut	горіх
nutrient-rich	багатий на поживні речовини

O

oasis	оазис
obstacle	перепона
ooze	болото
orchard	сад
oyster	устриця

P

pale	блідий
pattern	модель
pile up	накопичуватися
pine	сосна
pierce through	проникати
pipeline	трубопровід, нафтогін
plate	плита
plain	рівнина
peat	торф

pleat	складки
plug	кран, пробка
powerful	сильний
ptarmigan	куріпка
pour out	виливатися
profile	короткий нарис, інформація

Q

quarry	видобувати

R

relentlessly	наполегливо
remains	залишки; рештки
rapidly	швидко
resin	каучук
rainfall	дощ
rear	вирощувати
ripple	поріг
rivulet	струмок
root	корінь
rot	гнити

S

sand dune	піщана дюна
sapling	деревце
schist	сланець
scouring	полірувати
sedge	осока
sediments	відклади
seep	просочуватися
shale	глинистий сланець
shallow	мілкий
to shed leaves	скидати листя
shell	мушля
shellfish	молюск
shield	щит
shingle	галька
shoots	пагони
silt	намул
sink	занурюватись
spin	обертатись
sping	джерело
soil	ґрунт
slab	пластина
slate	сланець, шифер

slope	схил
sluggish	млявий
solution	розчин; рішення
source	витік
spine	колючка
spill	розливати
spring	джерело
stem	стебло
stonemason	каменяр
steamboat	пароплав
steep	крутий
stranded	викинутий на берег
straight	рівний, прямий
stick	прилипати
still adj	тихий, стоячий
stunted	низькорослий
sweep	змести
swirling	вируючий
swamp	болото
sulphur	сірка
supply	постачати
squirrel	білка
squeeze up	вичавити

T

temperate	помірний
tile	черепиця, кахель
tiny	крихітний
tilted	нахилений пласт
toad	жаба
tortoise	черепаха
trap *v*	захопити
tremendously	значною мірою
trickle	цівка
tributary	притока
trunk	стовбур
tussock	луговик дернистий

U

undulating	хвилястий
uneven	нерівний
upheaval	підняття
understorey	нижній ярус

V

vanish	зникати
vent	клапан

valley	долина
valuable	цінний
vineyard	виноградник
W	
wadi	пересохле русло ріки
wander	бродити
waterfall	водоспад
wax	віск
weeds	водорості
weird	дивний
well *v*	бити ключем
well *n*	колодязь
wind	вітер
whip	збивати, стібати
worm	хробак
Y	
yew	тис

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CONTENTS

Для нотаток

Навчальне видання

Ужик *Валентина Олексіївна*
Черкашина *Надія Іванівна*
Сергеєва *Олена Анатоліївна*

Англійська мова для географів

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Друк ризографічний

61077, Харків, майдан Свободи, 4,
Харківський національний університет імені В. Н. Каразіна,
Видавництво ХНУ імені В. Н. Каразіна

Надруковано ФОП «Петрова І. В.»
61144, Харків-144, вул. Гв. Широнінців, 79-в, к.137
Тел. 362-01-52

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